

 <p>Estd. 1962 "A++" Accredited by NAAC (2021) With CGPA 3.52</p>	<p><b>SHIVAJI UNIVERSITY, KOLHAPUR</b> 416 004, MAHARASHTRA PHONE : EPABX – 2609000, www.unishivaji.ac.in, bos@unishivaji.ac.in</p> <p><b>शिवाजी विद्यापीठ, कोल्हापूर</b> ४१६ ००४, महाराष्ट्र</p> <p>दूरध्वनी - ईपीएबीएक्स - २६०९०००, अभ्यासमंडळे विभाग - ०२३१-२६०९०९४</p>		
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SU/BOS/IDS / 390

Date: 11.7.24

To,  
The Principals,  
All Concerned Affiliated Colleges / Institutions.  
Shivaji University, Kolhapur.

Subject: Regarding syllabi of Bachelor Vocational under the Faculty of Inter-Disciplinary Studies.

Sir/Madam,

With reference to the subject, mentioned above, I am directed to inform you that the university authorities have accepted and granted approval to the syllabi of Bachelor Vocational under the Faculty of Inter-Disciplinary Studies.

1)	<b>B.Voc. Horticulture Science and Technology Part - III</b>
2)	<b>B.Voc. Building Technology &amp; Interior Design Part - III.</b>
3)	<b>B.Voc. Graphic Design Part - III.</b>


This syllabi and equivalence shall be implemented from the academic year 2024-2025 onwards. A soft copy containing the syllabi is attached herewith and it is also available on university website [www.unishivaji.ac.in](http://www.unishivaji.ac.in). (Students / Online Syllabus)

The question papers on the pre-revised syllabi of above mentioned course will be set for the examinations to be held in October /November 2024 & March/April 2025. These chances are available for repeater students, if any.

You are, therefore, requested to bring this to the notice of all students and teachers concerned.

Thanking you,

Yours faithfully,

  
Dr. S.M. Kubal  
(Dy Registrar)

Copy to:

1	Director Board of Evaluation and Examination	9	Centre for Distance Education
2	The Dean, Faculty of IDS	10	Computer Centre
3	The Chairman, Respective Board of Studies	11	Affiliation Section (U.G.)
4	B.A., B.Com., B.Sc. Exam	12	Affiliation Section (P.G.)
5	Eligibility Section	13	P.G. Admission Section
6	O.E. I, II, III, IV Section	14	Appointment Section

# **SHIVAJI UNIVERSITY KOLHAPUR**



**Ad-hoc Board in Building Technology & Interior Design**

**(New) Syllabus**

*For*

**B. Voc. Part - III**

**B.Voc. in Building Technology & Interior Design**

**To be implemented from December 2024-25 onwards**

## National Education Policy (NEP-2020)

### Third Year Bachelor of Vocation (B. Voc.- Degree) Course Structure for (Level-7)

#### With Multiple Entry and Multiple Exit option

(To be implemented from the Academic Year 2024-25)

Semester V – Duration: 6 Months											
Sr. No.	Teaching Scheme					Evaluation Scheme					
	Course	No. of Lectures		Hours (T + P)	Credits	Theory	Internal/ Practical	Total Marks	Min Marks (Separate passing)	Exam Duration (Hrs.)	
		T	P							T	P
1.	AECC-E	4	-	6	4	40	10	50	18	2	-
2.	GEC –E	4	2	6	4	40	10	50	18	2	-
3.	DSC –E-I	4	-	4	4	50	-	50	18	2	-
4.	DSC –E-II	4	-	4	4	50	-	50	18	2	-
5.	DSC –E-III	4	-	4	4	50	-	50	18	2	-
6.	SEC-E-I	-	4	4	2	-	50	50	18	-	3
7.	SEC-E-II	-	4	4	2	-	50	50	18	-	3
8.	SEC-E-III	-	4	4	2	-	50	50	18	-	3
9.	SEC-E-IV	-	-	2	2	-	50	50	18	-	-
	<b>Total</b>	20	14	<b>36</b>	<b>28</b>	<b>230</b>	<b>220</b>	<b>450</b>	<b>-</b>	<b>-</b>	

Semester VI – Duration: 6 Months											
Sr. No.	Teaching Scheme					Evaluation Scheme					
	Course	No. of Lectures		Hours (T + P)	Credits	Theory	Internal/ Practical	Total Marks	Min Marks (Separate passing)	Exam Duration (Hrs.)	
		T	P							T	P
1.	AECC-F	4	-	6	4	40	10	50	18	2	-
2.	GEC –F	4	2	6	4	40	10	50	18	2	-
3.	DSC –F-I	4	-	4	4	50	-	50	18	2	-
4.	DSC –F-II	4	-	4	4	50	-	50	18	2	-
5.	DSC –F-III	4	-	4	4	50	-	50	18	2	-
6.	SEC-F-I	-	4	4	2	-	50	50	18	-	3
7.	SEC-F-II	-	4	4	2	-	50	50	18	-	3
8.	SEC-F-III	-	4	4	2	-	50	50	18	-	3
9.	SEC-F-IV	-	-	2	2	-	50	50	18	-	-
	<b>Total</b>	20	14	<b>36</b>	<b>28</b>	<b>230</b>	<b>220</b>	<b>450</b>	<b>-</b>	<b>-</b>	

**Semester V – Duration: 6 Months**

<b>Sr. No.</b>	<b>Course</b>	<b>Subject Name</b>
1	AECC-E	Business Communication in English -III
2	GEC –E	sustainable construction-I
3	DSC –E-I	Estimation – I
4	DSC –E-II	Interior design -I
5	DSC –E-III	Working drawing – I
6	SEC-E-I	Laboratory work- Estimation – I
7	SEC-E-II	Laboratory Work- Interior design -I
8	SEC-E-III	Laboratory Work- Working drawing – I
9	SEC-E-IV	Internship

**Semester VI – Duration: 6 Months**

<b>Sr. No.</b>	<b>Course</b>	<b>Subject Name</b>
1	AECC-F	Business Communication in English -IV
2	GEC –F	sustainable construction-II
3	DSC –F-I	Estimation – II
4	DSC –F-II	Interior design -II
5	DSC –F-III	Working drawing – II
6	SEC-F-I	Laboratory Work- Estimation – II
7	SEC-F-II	Laboratory Work- Interior design -II
8	SEC-F-III	Laboratory Work- Working drawing – II
9	SEC-F-IV	Project

☐ Student Contact Hrs. Per week: 36 hrs.☐ Total marks for B. Voc.- Degree: 900☐ Theory and Practical Lectures: 48  
Minutes Each☐ Total credits for B. Voc.- Degree: 56

• Student Contact Hrs. Per week: 36 hrs.	• Total marks for B.Voc.- Degree: 900
• Theory and Practical Lectures: 48 Minutes Each	• Total credits for B.Voc.- Degree: 56
• AECC: Ability Enhancement Compulsory Course ( <b>Compulsory English</b> )	
• Practical workload will for batch of 20 students	
• Practical Examination will be conducted Semester wise for 50 Marks per course (subject).	
• DSC: Discipline Specific Core Course - Candidate can opt three courses (Subjects) from DSC.	
• GEC: Generic Elective Compulsory Course - Candidate can opt any one course (Subject).	
• There shall be separate passing for theory and practical courses.	
• AECC & GEC Internal Evaluation should be done at college or respective departmental level	
• SEC-E & SEC-F are two parts of Vocational Degree Course	

### **Eligibility:**

**Eligibility for Admission:** Advance Diploma

**Eligibility for Faculty:** 1) Post Graduate with NET / SET/Ph. D. Or  
2) Five Year Industry Experienced Personal  
2) M. A. (English) with NET/SET/Ph.D. for Business Communication in English

**Eligibility for Lab Assistant:** Graduation with related field

**Staffing Pattern: Teaching:** In the 1<sup>st</sup> year of B. Voc. – One Full Time  
one C. H. B. for Business Communication

**Lab. Assistant:** For 1<sup>st</sup> Year of B. Voc. – 1 Part Time  
For 2<sup>nd</sup> and 3<sup>rd</sup> Year (Inclusive of 1<sup>st</sup> Year) of B. Voc. – 1 Full Time

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**  
**(AECC-ED)**

**Paper – I: Business Communication in English -III**

**Paper No:.....**

**Credits: 04**

**Theory: 4 lectures/week**

**Total Marks: 50 (Theory 40 + Internal 10)**

**Units Prescribed for Theory: 40 Marks.**

**Course Outcomes:** The students will acquire knowledge of

1. To develop awareness of the complexity of the communication process
2. To develop effective listening skills in students so as to enable them to comprehend instructions and become a critical listener
3. To develop effective oral skills so as to enable students to speak confidently interpersonally as well as in large groups
4. To develop effective writing skills so as enable students to write in a clear, concise, persuasive and audience centered manner
5. To develop ability to communicate effectively with the help of electronic media

**Content of syllabus:**

**Unit-I: Concept of Communication**

(15 Hrs.)

Meaning, Definition, Process, Need, Feedback, Emergence of Communication as a key concept in the Corporate and Global world

**Unit – II Impact of technological advancements on Communication**

(15 Hrs.)

Types- Internet, Blogs, E-mails, Moodle, Social media (Facebook, Tweeter & WhatsApp) Advantages and Disadvantages

**Unit – III Problems in Communication**

(15 Hrs.)

Physical/ Semantic/Language / Socio-Cultural / Psychological / Barriers Ways to Overcome these Barriers

**Unit – IV Listening Skills**

(15 Hrs.)

Importance of Listening Skills, Obstacles to listening, cultivating good Listening Skills

**Practical: Based on the theory units:**

**Marks: 10**

**Books Recommended: (List of Minimum 5 Books)**

1. Agarwal, Anju D (1989) A Practical Handbook for Consumers, IBH.
2. Alien, R.K. (1970) Organizational Management through Communication.
3. Ashley, A (1992) A Handbook of Commercial Correspondence, Oxford University Press.
4. Aswal thapa, K (1991) Organizational Behavior, Himalayan Publication, Mumbai.
5. Atreya N and Guha (1994) Effective Credit Management, MMC School of Management, Mumbai.

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
- (2. Students can use scientific calculators in theory examination.)

**Pattern of a Question Paper**  
**B. Voc. Part-III Semester –V**  
**Business Communication in English -III(AECC-E)**

**Paper No:**

**Time: 2 hours**

**Total Marks: 40**

**Q.1 Do as directed questions items on unit 1 to be asked** **10 (10 out of 12)**

**Q.2 Write a letter of application** **10**

**OR**

**Draft a CV / Resume for a particular post** **10**

**Q.3 Present a given information or a data using a table/ chart/pie diagram, etc.** **10**

**(any one diagram to be drawn)**

**Q.4 Fill in the blanks in the given interview** **10**

**Practical Evaluation:**

**Oral and presentation based on units prescribed** **10 Marks**

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**  
**Generic Elective Compulsory Course (GEC– E)**  
**Paper Title: sustainable construction - I**

**Paper No:.....**

**Credits: 04**

**Theory: 4 lectures/week**

**Total Marks: 50 (Theory 40 + Internal 10)**

**Practical: 2 lectures/week/batch**

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**Course Outcomes:** The students will acquire knowledge of

1. Course explores the ever-trendy concept sustainability
2. Explore ability to study sustainable material.
3. Explore ability to study green Concept
4. Explore study of energy conservation.
5. The course will give knowledge of sustainable concept and explore the opportunity for specialization

**Content of syllabus:**

**Unit I: Global warming:**

**(15 Hrs)**

**Topic**

Introduction of global warming causes of global warming effects of global warming.

how global warmings affected by global warming?

How to overcome global warming.

**Unit II: Need of sustainable construction.**

**(15 Hrs)**

**Topic**

What is sustainable construction.

Necessary of sustainable constructions.

Advantages and disadvantages of sustainable constructions.

Application of sustainability in Building & interior

**Unit III: Sustainable building materials**

**(15 Hrs)**

**Topic**

Introduction to green building

Principles of green building

Features of green building

Introduction to sustainable materials.

Green building materials & products – bamboo, rice husk, ash concrete, plastic bricks, bagasse's particle board, insulated concrete forms.

Reuse of waste materials- plastics, rubber, newspaper wood, nontoxic paints, green roofing.



## Unit IV: Building life cycle.

(15 Hrs)

### Topic

Introduction to building life cycle.

Importance of building life cycle.

Need of this project

Five stages of building life cycles.

Application in building construction industry

### Books Recommended: (List of Minimum 5 Books)

Sr.no

Reference book name

Author

Publication

1	Sustainable Construction Techniques	Viola John	Edition Detail
2	Energy conservation & green building	Pooja pawar	Tech knowledge publications
3	Sustainable Design for Interior Environments	Susan M. Winchip	Fairchild Publications
4	Material Revolution: Sustainable and Multi-Purpose Materials for Design and Architecture	Sascha peter	Birkhauser

### Note: (If any - such as

(1. In theory examination, the weightage to numerical problems should not exceed 30%.

2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**  
**Discipline Specific Core Course (DSC– E-I)**  
**Paper Title: Estimation-I**

**Paper No:.....**

**Theory: 4 lectures/week**

**Credits: 04**

**Total Marks: 50 (Theory)**

**Course Outcomes:** The students will acquire knowledge of

**Content of syllabus:**

1. The course explores the ability to prepare estimation of interior project.
2. Course explores the knowledge of current material rates
3. The course explores the ability to enhance bidding process.
4. The course will give detailed knowledge to the student about the financial aspect and legal aspect in executing the project.
5. Coordinate between different contractors & able to manage the project.

**Unit I: Introduction of quantity survey.**

**(15 Hrs)**

**Topics -**

Measurement sheet preparation.

Explain the importance of nominal muster roll in the construction of the given structure.

Record the measurements in the measurement book for the given item of work for payment. Explain the specific term used in Interim payment of the given civil work.

Select criteria for granting advance to the contractor in the given situation with justification.

Select the relevant bill from in the given situation with justification.

Various account form and their uses measurement book a measurement book, nominal master, impressed cash, indent, invoice, bill, vouchers, and received cash book, temporary advance heads of accounts.

Mode of payment to the contractor and its necessary; Interim payment, advance payment, secured advance, Petty advance, mobilization fund, first and final bill, running account bill, retention money, Reduce rate payment, E-Payment.

**Unit II: Measurement sheet preparation of a building.**

**(15 Hrs)**

**Topics**

Measurement sheet preparation of a single room with attached toilet.

Draft the specifications for the given type of item.

classify the specification based on the given criteria propose the specifications for the construction of the given Item of work.

**Unit III: Measurement sheet preparation of various furniture elements.**

**(15 Hrs)**

1. Basic material & their rates i.e., stone, brick, clay product, cement, plaster of Paris, timber artificial boards, laminates fitting & fixtures, glass, plastic, metal, etc.
2. Quantity survey, rate analysis and specification of single & multi-items.
3. Estimate of single & multi-items.
4. Preparation of estimate for small interior design scheme& furniture layout.

**Books Recommended: (List of Minimum 5 Books)**

**REFERENCE BOOKS:**

Sr.no	Reference book name	Author	Publication
1	Interior design	Ahmed kaau	Ashish book centre
2	Building Construction	Rangwala	Charotar Publishing House Pvt. Ltd.
3	Estimating, Costing, Specification & Valuation in Civil Engineering	M. Chakroborti	Chakraborti; Twentyninth revised & Enlarged Edition (1 January 2006)
4	Interior design	V. Prataprao	Standard Publishers and Distributors Pvt Ltd.

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**  
**Discipline Specific Core Course (DSC– E-II)**  
**Paper Title: Interior design -I**

**Paper No: .....**

**Theory: 4 lectures/week**

**Credits: 04**

**Total Marks: 50 (Theory)**

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**Course Outcomes:** The students will acquire knowledge of

1. Apply professional design acumen with enhanced skill of planning interior Project.
2. Emphasis to the relationship of space to the contextual environment, achieving design interpretations through client profiling, case study & framing of requirements.
3. Application of advanced knowledge to materials used, construction techniques, furniture & services while designing highly complex and complicated spaces.
4. Discuss and on décor how it enhances and reflect concept
5. Explore a variety of visual presentation techniques
6. Explore verbal presentation skills to elaborate design projects.

**Content of syllabus:**

**Unit I: Residential interior design and drawing**

**(15 Hrs)**

**Topics**

Instruction regarding design briefs, relevant aspect of materials, constructions, design and services, special guidelines towards case studies, observations, analysis; and towards achieving individual interpretations manifested through client profiling and requirement framing.

Prepare and present scale plan, sectional elevation, technical representation and proportionate 3D visual drawings all drawn, and color rented manually or computerized that depict case studies, manifestations, concepts, schematic presentation and Technical drawings.

**Unit II: AUTO CAD**

**(15 Hrs)**

Details- Introduction to CAD and relevant software,

2D commands to draw building component such as door, window, wall

Modification of commands tot alter the existing drawing

Presentation Drawing

Plot/point

**Unit III: History of furniture**

**(15 Hrs)**

**Unit IV: Interior Services**

**(15 Hrs)**

**Books Recommended: (List of Minimum 5 Books)**

**REFERENCE BOOKS:**

Sr.no	Reference book name	Author	Publication
1	Interior design	Ahmed kaau	Ashish book centre
2	The best exhibition stands designs 2	Stafford cliff	Roto vision
3	Store: retails display and design	Vilma barr Katherine field	PBC International Inc.
4	Interior design	V. Prataprao	Standard Publishers and Distributors Pvt Ltd.
5	Design for shopping for retails interiors	Nanuilee sara	Laurance king publication itd.

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part II - Sem. V**  
**Discipline Specific Core Course (DSC– E-III)**  
**Paper Title: Working drawing – I**

**Paper No:.....**

**Credits: 04**

**Theory: 4 lectures/week**

**Total Marks: 50 (Theory)**

**Course Outcomes:** The students will acquire knowledge of

1. Explore technical drawing for 2-3 interior design projects, one each in residential projects.
2. Use manual and computer tools in drafting the portfolios.
3. Exploring learning detail drawing for execution onsite
4. Exploring various material & technics in drawing for execution.
5. The course provides confidence in the student to execute their innovative concept.

**Content of syllabus:**

**Unit I: Introduction to working drawing.**

**(..... Hrs)**

Topics:

Classify the given building based on the given Occupancy and the type of construction. categories the components parts of given type of building compare the given parameters of given load bearing and frame structure.

Prepare Foundation plan to Mark layout on the ground of the load bearing and non-load bearing structure from the given building plan

**Unit II: Civil plan & centreline plan of building**

**(15 Hrs)**

Topics: Introduction to various types of drawings i.e. civil plan, dimension plan, furniture plan, services layout likes electrical layout, plumbing layout, drainage layout, security layout etc

**Unit III: Sections & elevations**

**(15 Hrs)**

Topics

Describe the procedure of how to draw sections and elevations of building structure. Mention details of building structure in sections and elevations also likes. Define measurements building structure.

Symbolic hatching of materials like brick work, stonework, RCC work, plinth work PCC work etc.

**Unit IV: Services layout**

**(15 Hrs)**

Topics

Describe the procedure of how to draw electrical layout, plumbing and Drainage layout, ceiling layout, flooring layout, security layout, with symbolic presentation.

Electrical layout: symbols & layout for building.

Plumbing layout: water supply layout for building.

Drainage layout: house drainage layout for building.

**UNIT V: Municipal drawing**

**(15 Hrs)**

Topics

Describe the procedure of how to draw& read municipal drawing as well as how to write content of municipal drawing with the help of CADD Presentations.

**Books Recommended: (List of Minimum 5 Books) REFERENCE BOOKS:**

Sr.no	Reference book name	Author	Publication
1	Interior design	Ahmed kaau	Ashish book centre
2	Building Construction	Rangwala	Charotar Publishing House Pvt. Ltd.
3	Interior design illustrated	Francis D. K. Ching, Corky Binggeli	Wiley
4	Building illustrated	Francis D. K. Ching, Corky Binggeli	Wiley
5	Interior design	V. Prataprao	Standard Publishers and Distributors Pvt Ltd.

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**  
**Skill Enhancement Courses (SEC– E-I)**  
**Paper Title: Estimation-I**

**Paper No:.....**

**Practical: 4 lectures/week**

**Credits: 02**

**Total Marks: 50 (Practical)**

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**Course Outcomes:** The students will acquire knowledge of

1. The course explores the ability to prepare estimation of interior project.
2. Course explores the knowledge of current material rates
3. The course explores the ability to enhance bidding process.
4. The course will give detailed knowledge to the student about the financial aspect and legal aspect in executing the project.
5. Coordinate between different contractors & able to manage the project.

**Pre-requisites Note: (If Any- such as Knowledge of the topics in the theory papers.)**

**List of Practical's: (Minimum 10)**

1. Specification for any structural masonry. (Brick wall)
2. Specification for any non-structural masonry. (Wooden partition)
3. Specification for flooring in a living room.
4. Specification for false ceiling in a living room.
5. Specification for painting in a living room.
6. specification of painting work of interior space.
7. Rate analysis of Kadapa shelves cupboards.
8. Rate analysis of granite kitchen platform.
9. Rate analysis of brick masonry sitting.
10. Rate analysis of plaster work.

**Student Instructions:**

1. Arrive on time and be prepared.
2. Follow safety procedures.
3. Ask questions if you do not understand something

**Laboratory Requirements:**

1. Specialized computer lab
2. Drawing Instruments

**Nature of Practical Question Paper:**

**Attempt any five of the following**

- |  |          |
|--|----------|
| 1. Define specification of brick wall.       | 10 marks |
| 2. Define specification of wooden partition. | 10 marks |



- |   |                 |
|---|-----------------|
| <b>3. Define specification of flooring in living room.</b>        | <b>10 marks</b> |
| <b>4. Prepare analysis of rate for Kadapa shelves cupboards.</b>  | <b>10 marks</b> |
| <b>5. Prepare analysis of rate for granite kitchen platforms.</b> | <b>10 marks</b> |
| <b>6. Prepare analysis of rate for brick masonry sitting.</b>     | <b>10 marks</b> |

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**

**Skill Enhancement Courses (SEC– E-II)**

**Paper Title: Interior design -I**

**Paper No: .....**

**Practical: 4 lectures/week**

**Credits: 02**

**Total Marks: 50 (Practical)**

**Course Outcomes:** The students will acquire knowledge of

1. Apply professional design acumen with enhanced skill of planning interior Project.
2. Emphasis to the relationship of space to the contextual environment, achieving design interpretations through client profiling, case study & framing of requirements.
3. Application of advanced knowledge to materials used, construction techniques, furniture & services while designing highly complex and complicated spaces.
4. Discuss and on décor how it enhances and reflect concept
5. Explore a variety of visual presentation techniques
6. Explore verbal presentation skills to elaborate design projects.

**Pre-requisites Note: (If Any- such as Knowledge of the topics in the theory papers.)**

**List of Practical's: (Minimum 10)**

- 1) Civil plan
- 2) Plan with specification
- 3) Sections
- 4) Flooring layout
- 5) Ceiling layout
- 6) Electrical layout
- 7) Security layout
- 8) Plumbing & drainage layout
- 9) Furniture details
- 10) Sketch views

**Student Instructions:**

1. Arrive on time and be prepared.
2. Follow safety procedures.
3. Ask questions if you do not understand something

**Laboratory Requirements:**

1. Specialized computer lab
2. Drawing Instruments

**Nature of Practical Question Paper:**

1. Prepare a civil plan for residential building and fix the following layouts. (any five)

A) Flooring layout

**10 marks**

B) Ceiling layout

**10 marks**

<b>C) Electrical layout</b>	<b>10 marks</b>
<b>D) Plumbing and drainage layout</b>	<b>10 marks</b>
<b>E) Furniture layout</b>	<b>10 marks</b>
<b>F) Plan with specification</b>	<b>10 marks</b>

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**

**Skill Enhancement Courses (SEC– E-III)**

**Paper Title: Working drawing – I**

**Paper No:.....**

**Practical: 4 lectures/week**

**Credits: 02**

**Total Marks: 50 (Practical)**

**Course Outcomes:** The students will acquire knowledge of

1. Explore technical drawing for 2-3 interior design projects, one each in residential projects.
2. Use manual and computer tools in drafting the portfolios.
3. Exploring learning detail drawing for execution onsite
4. Exploring various material & technics in drawing for execution.
5. The course provides confidence in the student to execute their innovative concept.

**Pre-requisites Note: (If Any- such as Knowledge of the topics in the theory papers.)**

**List of Practical's: (Minimum 10)**

1. Civil plan
2. Plan with specification
3. Sections
4. Flooring layout
5. Ceiling layout
6. Electrical layout
7. Security layout
8. Plumbing & drainage layout
9. Furniture details
10. Sketch views

**Student Instructions:**

1. Arrive on time and be prepared.
2. Follow safety procedures.
3. Ask questions if you do not understand something

**Laboratory Requirements:**

1. Specialized computer lab
2. Drawing Instruments

**Nature of Practical Question Paper:**

- 1) Prepare a civil plan for residential building and fix the following layouts. (any five)
  - A) Flooring layout 10 marks
  - B) Ceiling layout 10 marks
  - C) Electrical layout 10 marks
  - D) Plumbing and drainage layout 10 marks
  - E) Furniture layout 10 marks
  - F) Plan with specification 10 marks

**Bachelor of Vocation (B. Voc.) Part III - Sem. V**  
**Skill Enhancement Courses (SEC– E-IV)**  
**Paper Title: Internship/Field Work/Industrial Visit/Study Tour.**

**Paper No:.....**

**Credits: 02**

**Term Work: 2 lectures/week**

**Total Marks: 50(Internal)**

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**Course Outcomes:** The students will acquire knowledge of

1. the student will be able to design residential interior spaces.
2. the student will be able to design commercial interior spaces
3. student will be able to apply appropriate materials also.
4. generate 2D & 3D Drawings including services layout as well as working drawings.
5. student will be able to do estimate of project.

**Important Note:** Field Work/Industrial Visit/Study Tour should be of **minimum five days** in or out of Maharashtra.

**Suggested Places:**

1. In Maharashtra:
2. Out of Maharashtra:

**Student Instructions:**

1. Expose the students to the work environment
2. Familiarize and adapt to the workplace
3. Understand the methods, techniques and practices followed in the place of training Laboratory

**Laboratory Requirements:**

- 1.
- 2.

**Nature of Evaluation: INTERNAL**

**Internal internship evaluation**

**50 marks**

- |                                    |          |
|------------------------------------|----------|
| i) Submission of internship report | 30 marks |
| ii) Viva–Voce                      | 20 marks |

**Pattern of a Question Paper**  
**B. Voc. Part-III Semester –VI**  
**Business Communication in English -IV(AECC-F)**

**Time: 2 hours**

**Total Marks: 40**

**Units Prescribed for Theory: 40 Marks.**

**Course Outcomes:** The students will acquire knowledge of

1. To understand and demonstrate writing and speaking processes through invention, organization, drafting, revision, editing, and presentation.
2. To understand the importance of specifying audience and purpose and to select appropriate communication choices.
3. To understand and appropriately apply modes of expression, i.e., descriptive, expositive, narrative, scientific, and self-expressive, in written, visual, and oral communication.
4. To participate effectively in groups with emphasis on listening, reflective thinking, and responding.
5. To develop the ability to research and write a documented paper and/or to give an oral presentation.

**Content of syllabus:**

**Unit-I: Theory of Business Letter Writing**

**(15 Hrs.)**

Parts, Structure, Layouts—Full Block, Modified Block, Semi - Block  
Principles of Effective Letter Writing, Principles of effective Email Writing

**Unit – II Personnel Correspondence**

**(15 Hrs.)**

Statement of Purpose  
Job Application Letter and Resume, Letter of Acceptance of Job Offer, Letter of Resignation

**Unit – III Language and Writing Skills**

**(15 Hrs.)**

Paragraph Writing -Developing an idea, using appropriate linking devices, etc. Cohesion and Coherence, self-editing, etc.  
[Interpretation of technical data, Composition on a given situation, a short informal report etc.]

**Unit – IV Interviews**

**(15 Hrs.)**

Preparing for an Interview  
Types of Interviews – Selection, Appraisal, Grievance, Exit, Group Discussion

**Practical: Based on the theory units:**

**Marks: 10**

**Books Recommended: (List of Minimum 5 Books)**

1. Bahl, J. C. and Nagamia, S.M. (1974) Modern Business Correspondence and Minute Writing.
2. Balan, K.R. and Rayudu C.S. (1996) Effective Communication, Beacon New Delhi.
3. Basu, C.R. (1998) Business Organisation and Management, T.M.H. New Delhi.
4. Banerjee, Bani P (2005) Foundation of Ethics in Management Excel Books
5. Businessworld Special Collector's Issue: Ethics and the Manager

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
- (2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part II - Sem. VI (Degree)**  
**Generic Elective Compulsory Course (GEC– F)**  
**Paper Title: sustainable construction-II**

**Paper No:.....**

**Credits: 04**

**Theory: 4 lectures/week**

**Total Marks: 50 (Theory 40 + Internal 10)**

**Practical: 2 lectures/week/batch**

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**Course Outcomes:** The students will acquire knowledge of

1. Course explores the ever-trendy concept sustainability
2. Explore ability to study sustainable material.
3. Explore ability to study green Concept
4. Explore study of energy conservation.
5. The course will give knowledge of sustainable concept and explore the opportunity for specialization

**Content of syllabus:**

**Unit 1: Energy and energy conservation**

**(15 Hrs.)**

**Topics**

**Renewable Energy sources:** Solar energy, wind energy, ocean energy, hydro energy, biomass energy.

**Non-renewable energy sources:** Coal, Petroleum, natural gas, nuclear energy, chemical sources of energy fuel, cells, hydrogen, and biofuel etc.

**Energy conservation:** Introduction specific objectives present scenario, need of energy conservation LEED India rating system and Energy Efficiency.

**Function** of government organization working for energy conservation and Audit (**ECA**)

National Productivity Council (**NPC**)

Ministry of new and renewable energy (**MNRE**)

**Unit 2: Green building**

**(15 Hrs.)**

**Topics**

**Introduction:** Definition of green building benefits of green building.

**Principles:** Principles of green building planning concept of green building.

**Features:** Salient features of green building, environmental design Strategies for building construction.

**Process:** Improvement in Environmental quality in civil structure.

**Materials:** Green building materials and products such as plastic bricks, particle board, bamboo, bagasse board, etc.

**Unit 3: Rating system for green building.**

**(15 Hrs.)**

**Topics**

Leadership in energy and environmental design (LEED) criteria.

Indian green building Council (IGBC)

Green rating for integrated habitat assessment (GRIHA)

HVAC units in green building.

**Unit 4: What is Indoor Environment Quality (IEQ)**

**(15 Hrs.)**

• Elements associated to IEQ –

+

**REFERENCE BOOKS:**

Sr.no	Reference book name	Author	Publication
1	Sustainable Construction Techniques	Viola John	Edition Detail
2	Energy conservation & green building	Pooja pawar	Tech knowledge publications
3	Sustainable Design for Interior Environments	Susan M. Winchip	Fairchild Publications
4	Material Revolution: Sustainable and Multi-Purpose Materials for Design and Architecture	Sascha peter	Birkhauser

Reference link:

- 1) <https://www.grihaindia.org/>
- 2) <https://igbc.in/igbc/>
- 3) <https://www.ribabooks.com/sustainability>

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)



**Bachelor of Vocation (B. Voc.) Part III - Sem. VI (Degree)**

**Discipline Specific Core Course (DSC– F-I)**

**Paper Title: Estimation-II**

**Paper No:.....**

**Theory: 4 lectures/week**

**Credits: 04**

**Total Marks: 50 (Theory)**

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**Course Outcomes:** The students will acquire knowledge of

1. Course explores ability to prepare estimation of interior project.
2. Course explores the knowledge of current material rates.
3. Course explores the ability to enhance bidding process.
4. Course will give detail knowledge to the student about financial aspect and legal aspect in executing the project.

**Content of syllabus:**

**Unit 1 Contractors billing for large Interior Design projects.**

**(15 Hrs.)**

B) Site Instruction book.

C) Extra items than tender book.

D) Running bills and final bill of contract.

E) Certificate of payment

**Unit 2 Tender & Tender documents**

**(15 Hrs.)**

**Introduction aspect and contest introduction & definition.**

Tender procedure: Tender document preparation, type of invitations (public, private, negotiation) floating of tender, opening and award of tender.

Aspects of tender: Unit of measurement mode of measurement specifications of raw material.

Specification of schedule writing.

Of tender document undertaken from contractor, pre-qualification of tender, general condition of tender, below quantities and set of working drawing, material specification.

**Unit III: Estimation and Costing**

**(15 Hrs.)**

Need of Estimation and Costing.

Components and costing.

Drawing and specification, units and mode of measurement, work output, materials, and labour cost, contingencies, profit margin and indirect cost.

**Unit IV: Career opportunity and professional ethics entering the profession**

**(15 Hrs.)**

Avenue for professional practice including advantage and limitations.

Of conduct and responsibilities toward client, fellow professionals, profession, contractor suppliers and other consultant & society.

**Books Recommended: (List of Minimum 5 Books)**

Sr.no	Reference book name	Author	Publication
1	Interior design	Ahmed kaau	Ashish book centre
2	Building Construction	Rangwala	Charotar Publishing House Pvt. Ltd.
3	Estimating, Costing, Specification & Valuation In Civil Engineering	M. Chakroborti	Chakraborti; Twentyninth revised & Enlarged Edition (1 January 2006)
4	Interior design	V. Prataprao	Standard <i>Publishers</i> and Distributors Pvt Ltd.
5	Professional practice	Roshan namvatti	Lakhani book depot

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part III - Sem. VI (Degree)**

**Discipline Specific Core Course (DSC– F-II)**

**Paper Title: Interior Design -II**

**Paper No:.....**

**Theory: 4 lectures/week**

**Credits: 04**

**Total Marks: 50 (Theory)**

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**Course Outcomes:** The students will acquire knowledge of

1. Apply professional design acumen with enhanced skill of planning interior Project.
2. Emphasis to the relationship of space to the contextual environment, achieving design interpretations through client profiling, case study & framing of requirements.
3. Application of advanced knowledge to materials used, construction techniques, furniture & services while designing highly complex and complicated spaces.
4. Discuss and on décor how it enhances and reflects concept.
5. Explore a variety of visual presentation techniques
6. Explore verbal presentation skills to elaborate design projects
7. Design a large space up to 1000 SQM for residential, Commercial space by application of theory of Design, conceptualization ideologies and explorations in design, working details, Use of Technology, Use of Materials, and Presentation Skills etc.

**Content of syllabus:**

The student will be able to:

**Unit 1.** Design of large scale and specialized multi- functional interior species like Institutional problems related health, education, corporate Offices, shopping and entertainment malls, Town squares, Airports, Bus stops, Railway stations, Boats, Ports etc. **(15 Hrs.)**

**Unit 2** Use a variety of drawing media to effectively communicate design development **(15 Hrs.)**

**Unit 3** Use a variety of drawing media to effectively communicate design solutions **(15 Hrs.)**

**Unit 4** Understand and discuss the interior environment in the context of the exterior **(15 Hrs.)**

**Books Recommended: (List of Minimum 5 Books)**

Sr.no	Reference book name	Author	Publication
1	Interior design	Ahmed kaau	Ashish book centre
2	The best exhibition stands designs 2	Stafford cliff	Roto vision
3	Store: retails display and design	Vilma barr Katherine field	PBC International Inc.
4	Interior design	V. Prataprao	Standard <i>Publishers</i> and Distributors Pvt Ltd.
5	Design for shopping for retails interiors	Nanuilee sara	Laurance king publication itd.

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part III - Sem. VI (Degree)**

**Discipline Specific Core Course (DSC– F-III)**

**Paper Title: Working drawing – II**

**Paper No:.....**

**Theory: 4 lectures/week**

**Credits: 04**

**Total Marks: 50 (Theory)**

**Course Outcomes:** The students will acquire knowledge of

The students will acquire knowledge of

1. Explore technical drawing for 2-3 interior design projects, one each in Commercial projects.
2. Use manual and computer tools in drafting the portfolios.
3. Exploring learning detail drawing for execution onsite
4. Exploring various material & technics in drawing for execution.
5. The course provides confidence in the student to execute their innovative concept.

**Content of syllabus:**

**Unit I: Introduction to working drawing.**

**(12 Hrs.)**

Topics:

Classify the given building based on the given Occupancy and the type of construction. categories the components parts of given type of building compare the given parameters of given load bearing and frame structure.

Prepare Foundation plan to Mark layout on the ground of the load bearing and non-load bearing structure from the given building plan

**Unit II: Civil plan & centerline plan of building**

**(12 Hrs.)**

Topics: Introduction to various types of drawings i.e. civil plan, dimension plan, furniture plan, services layout likes electrical layout, plumbing layout, drainage layout, security layout etc

**Unit III: : Sections & elevations**

**(12 Hrs.)**

Topics

Describe the procedure of how to draw sections and elevations of building structure. Mention details of building structure in sections and elevations also likes. Define measurements building structure.

Symbolic hatching of materials like brick work, stonework, RCC work, plinth work PCC work etc.

**Unit IV: Services layout**

**(12 Hrs.)**

Topics

Describe the procedure of how to draw electrical layout, plumbing and Drainage layout, ceiling layout, flooring layout, security layout, with symbolic presentation.

Electrical layout: symbols & layout for building.

Plumbing layout: water supply layout for building.

Drainage layout: house drainage layout for building.

**UNIT 6: Municipal drawing**

**(12 Hrs.)**

Topics

Describe the procedure of how to draw& read municipal drawing as well as how to write content of municipal drawing with the help of CADD Presentations.

**Books Recommended: (List of Minimum 5 Books) REFERENCE BOOKS:**

Sr.no	Reference book name	Author	Publication
1	Interior design	Ahmed kaau	Ashish book centre
2	Building Construction	Rangwala	Charotar Publishing House Pvt. Ltd.
3	Interior design illustrated	Francis D. K. Ching, Corky Binggeli	Wiley
4	Building illustrated	Francis D. K. Ching, Corky Binggeli	Wiley
5	Interior design	V. Prataprao	Standard Publishers and Distributors Pvt Ltd.

**Note: (If any - such as**

- (1. In theory examination, the weightage to numerical problems should not exceed 30%.
2. Students can use scientific calculators in theory examination.)

**Bachelor of Vocation (B. Voc.) Part III - Sem. VI (Degree)**

**Skill Enhancement Courses (SEC– F-I)**

**Paper Title: Estimation-II**

**Paper No:.....**

**Practical: 4 lectures/week**

**Credits: 02**

**Total Marks: 50 (Practical)**

**Course Outcomes:** The students will acquire knowledge of

1. Course explores ability to prepare estimation of interior project.
2. Course explores the knowledge of current material rates.
3. Course explores the ability to enhance bidding process.
4. Course will give detail knowledge to the student about financial aspect and legal aspect in executing the project.

**Pre-requisites Note: (If Any- such as Knowledge of the topics in the theory papers.)**

**List of Practical's: (Minimum 10)**

1. Rate analysis of any structural masonry. (Brick wall)
2. Rate analysis of any non-structural masonry. (glass partition)
3. Rate analysis of flooring in a living room.
4. Rate analysis of painting in a living room.
5. Rate analysis of Wardrobe.
6. Rate analysis of bed.
7. Rate analysis of dressing table.
8. Rate analysis of wooden partition.
9. Rate analysis of Aluminum partition.
10. Prepare a set of item rate tenders for any one residential or commercial project.

**Student Instructions:**

1. Arrive on time and be prepared.
2. Follow safety procedures.
3. Ask questions if you do not understand something

**Laboratory Requirements:**

1. Specialized computer lab
2. Specialized Drawing room.

**Nature of Practical Question Paper:**

**Que 1. Attempt any five of the following.**

**(A) Analyse the rate of the following building component (any five)**

- |                            |          |
|----------------------------|----------|
| a) Brick wall              | 10 marks |
| b) Flooring                | 10 marks |
| c) Wardrobe                | 10 marks |
| d) Dressing table          | 10 marks |
| e) Aluminium partition     | 10 marks |
| f) Painting in living room | 10 marks |

**Bachelor of Vocation (B. Voc.) Part III - Sem. VI (Degree)**  
**Skill Enhancement Courses (SEC– F-II)**  
**Paper Title: Interior Design-II**

**Credits: 02**

**Practical: 4 lectures/week**

**Total Marks: 50 (Practical)**

**Course Outcomes:** The students will acquire knowledge of

1. Apply professional design acumen with enhanced skill of planning interior Project.
2. Emphasis to the relationship of space to the contextual environment, achieving design interpretations through client profiling, case study & framing of requirements.
3. Application of advanced knowledge to materials used, construction techniques, furniture & services while designing highly complex and complicated spaces.
4. Discuss and on décor how it enhances and reflects concept.
5. Explore a variety of visual presentation techniques
6. Explore verbal presentation skills to elaborate design projects
7. Design a large space up to 1000 SQM for residential, Commercial space by application of theory of Design, conceptualization ideologies and explorations in design, working details, Use of Technology, Use of Materials, and Presentation Skills etc.

**Pre-requisites Note: (If Any- such as Knowledge of the topics in the theory papers.)**

**List of Practical's: (Minimum 10)**

- 1) Civil plan
- 2) Plan with specification
- 3) Sections
- 4) Flooring layout
- 5) Ceiling layout
- 6) Electrical layout
- 7) Security layout
- 8) Plumbing & drainage layout
- 9) Furniture details
- 10) Sketch views

**Student Instructions:**

1. Arrive on time and be prepared.
2. Follow safety procedures.
3. Ask questions if you do not understand something

**Laboratory Requirements:**

1. Specialized computer lab
2. Specialized Drawing room.



**Nature of Practical Question Paper:**

**1) Prepare a civil plan for residential building and fix the following layouts. (any five)**

- |  |                 |
|--|-----------------|
| <b>A) Flooring layout</b>              | <b>10 marks</b> |
| <b>B) Ceiling layout</b>               | <b>10 marks</b> |
| <b>C) Electrical layout</b>            | <b>10 marks</b> |
| <b>D) Plumbing and drainage layout</b> | <b>10 marks</b> |
| <b>E) Furniture layout</b>             | <b>10 marks</b> |
| <b>F) Plan with specification</b>      | <b>10 marks</b> |

**Bachelor of Vocation (B. Voc.) Part III - Sem. VI (Degree)**

**Skill Enhancement Courses (SEC– F-III)**

**Paper Title: Working Drawings-II**

**Paper No:.....**

**Practical: 4 lectures/week**

**Credits: 02**

**Total Marks: 50 (Practical)**

**Course Outcomes:** The students will acquire knowledge of

1. Explore technical drawing for 2-3 interior design projects, one each in Commercial projects.
2. Use manual and computer tools in drafting the portfolios.
3. Exploring learning detail drawing for execution onsite
4. Exploring various material & technics in drawing for execution.
5. The course provides confidence in the student to execute their innovative concept.

**Pre-requisites Note: (If Any- such as Knowledge of the topics in the theory papers.)**

**List of Practical's: (Minimum 10)**

1. Civil plan
2. Plan with specification
3. Sections
4. Flooring layout
5. Ceiling layout
6. Electrical layout
7. Security layout
8. Plumbing & drainage layout
9. Furniture details
10. Sketch views

**Student Instructions:**

1. Arrive on time and be prepared.
2. Follow safety procedures.
3. Ask questions if you do not understand something

**Laboratory Requirements:**

1. Specialized computer lab
2. Specialized Drawing room.

**Nature of Practical Question Paper:**

- 2) Prepare a civil plan for residential building and fix the following layouts. (any five)

G) Flooring layout

**10 marks**

H) Ceiling layout

**10 marks**

<b>I) Electrical layout</b>	<b>10 marks</b>
<b>J) Plumbing and drainage layout</b>	<b>10 marks</b>
<b>K) Furniture layout</b>	<b>10 marks</b>
<b>L) Plan with specification</b>	<b>10 marks</b>

**Bachelor of Vocation (B. Voc.) Part III - Sem. VI (Degree)**

**Skill Enhancement Courses (SEC– F-IV)**

**Paper Title: Project**

**Paper No:.....**

**Term Work: 2 lectures/week**

**Credits: 02**

**Total Marks: 50(Internal)**

**Course Outcomes:** The students will acquire knowledge of Independent project of design (Research or Design Based) is supposed to be prepared by the student with help of Knowledge acquired within two years of syllabus.

1. Design oriented projects can be Residential, Commercial, Hospitality, Health Centers,
2. Museums etc..
3. research oriented projects like, Lighting Design, Product Design, Study of Different
4. Design Theories, & Elements like Golden Mean Ratio etc.
5. with the final conclusion of the projects should be implemented in interior space like.
6. residential commercial hostility etc. in the form of Drawings.
7. Minimum area of the project should be up to 1500 sq.mt
8. The course provides confidence in the student to execute them innovate concept in reality

**Important Note:** Field Work/Industrial Visit/Study Tour should be of **minimum five days** in or out of Maharashtra.

**Suggested Places:**

1. In Maharashtra:
2. Out of Maharashtra:

**Nature of Evaluation: INTERNAL**

**Internal project evaluation**

**50 marks**

- i) Submission of project thesis/report **30 marks**
- ii) Viva–Voce **20 marks**