CURRICULUM OF DIPLOMA PROGRAMME ON

INTERIOR DESIGN (ID)

FOR THE STATE OF NAGALAND

COURSE DURATION- 3 YEARS

Approved by:
State Council for Technical Education (SCTE),
Department of Technical Education,
Kohima, Nagaland
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Prepared by:
Government Polytechnic Peren (GPP)

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SAMPLE PATH SEMESTER WISE

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2. SALIENT FEATURES OF DIPLOMA PROGRAMME IN INTERIOR DESIGN

- Name of the Program: Diploma in Interior Design
- Duration of the Program: Three years (Six Semesters)
- Entry Qualification: Matriculation (HSLC passed) with 45% marks in maths and science.
- Intake: 15
- Pattern of the Program: Semester System
- Mode of Admission: Through Diploma Entrance Examination (DEE)
- Industrial Tour: Included in 5th semester. Total marks allotted for industrial training will be 50.
- Ecology and Environment: As per Govt. of India directives, a subject on Environmental Studies has been incorporated in the curriculum.

3. EMPLOYMENT OPPORTUNITIES FOR DIPLOMA HOLDERS IN INTERIOR DESIGN

Keeping in view, the present scenario of activities in the field of Interior Design, following employment opportunities are visualized for diploma holders in Interior Design. It is a good career option for those who are good at creativity and ideas. It has good scope and opportunities.

a) Wage employment in:

i. State Public Works Department
ii. Local Development Authorities
iii. Teaching profession
iv. Public sector/private construction companies/Interior design firms/Architectural firms or offices
v. Service sector i.e., commercial areas like hotels, offices etc. for repair and maintenance of buildings and their upkeep.
vi. Supervision work for various Interior/Construction sites.
vii. Drafting on AutoCAD/Sketchup for outsourcing companies
viii. Technical institutions.

b) Self-employment opportunities:

i. Freelance consultancies work as
   - An Interior Designer
   - Product Designer
   - Furniture Designer
ii. Execution and supervision of Interior Renovation projects.
iii. Preparation of 3-D Perspective views of Interior spaces and buildings for Interior Designers, Architects, and consultants.
iv. Own unit/enterprise for
   a) Model making
   b) Landscaping, Terrace gardening, Vertical gardens, Interior Plantation
   c) Drawings on CAD, Sketchup
v. Interior design related works like: White washing, distempering, repair and maintenance of buildings, POP work, texture work, false ceiling, specialized flooring, wood working and furniture manufacturing, fabrication in steel, M.S brass and copper metals, Plumbing services and its components, electrical

services, and its components etc.

vi. Establishing an outsourcing company of computerized drafting,
vii. Construction and Interior material suppliers/marketing
viii. Estimating and costing jobs/bill of quantities
ix. Water proofing of existing and new building
x. Services to architectural and Interior design firms:

-Site supervision
-Site surveying and layout
-Estimation and billing
-Site/marketing of building components
-Liaison work

4. LEARNING OUTCOME OR COMPETENCY PROFILE OF DIPLOMA HOLDERS IN INTERIOR DESIGN

Keeping in view the employment opportunities given above, following are the important activities (priority-wise) of diploma holders in Interior Design:

i) Preparation and Interpretation of drawings:
- Preliminary drawings (Line plans, sketching, tracing)
- Presentation drawings (Rendering in black and white, color, perspective drawings)
- Submission drawings
- Working drawings and detailing
- Preparation of prints and plots and their upkeep
- Maintenance of drawing records and files
- Services drawings

ii) Preparation of small building designs, Interior Furniture layouts and Circulations

iii) Site supervision/ management i.e., measuring, surveying and inspection.

iv) Preparation of models:
- Study models
- Block models
- Detailed Model

v) Assistance in preparation of tender documents and cost estimates, including valuation.

vi) Interior designing, execution, and layout

vii) Management of Interior Designer's/ Architect's office

viii) Market survey of construction and Interior materials

Keeping in view the employment opportunities and job profile of diploma holders of Interior Design, following LEARNING OUTCOME or competencies are required to be developed in the students:

i) Development of skills in free-hand sketching, lettering and preparation of presentation, submission, structural and working drawings and detailed thereof.

ii) Development of basic knowledge and skills for preparing small building designs and Interior layouts. Development of skills in model making using different

materials

iii) Development of skills in preparation of submission drawings, corporation drawings and related documents

iv) Development of knowledge and skills in site management comprising of measurement, surveying, and inspection

v) Development of basic knowledge and skills in preparing rough estimates, preparation of detailed estimates and tender documents for Interior of small buildings

vi) Development of skills in taking out prints/ plots, cloth mounting, coloring, and folding of prints and their upkeep.

vii) Appreciation of basic knowledge regarding various building and Interior materials with their application techniques and details

viii) Development of basic knowledge about elements & principles of theory of design

ix) Development of basic knowledge of history of Interior and Furniture Design, with emphasis on construction and application techniques

x) Development of knowledge and skills in applications of computers in Interior design and Architecture

xi) Development of basic understanding of resource systems helping in the financing of small enterprises

xii) Development of basic knowledge of climatology, environment, and ecology

xiii) Development of basic knowledge about product designing and Display methods and their details for execution of design

xiv) Development of understanding of detailed building and interior services

xv) Development of communication and managerial skills

xvi) Development of basic hand-on practice skills

xvii) Demonstrate appropriate values and attitude.

5. DERIVING CURRICULUM AREAS FROM LEARNING OUTCOME/COMPETENCY PROFILE

Sr.	Competency Profile	Curriculum Areas
1.	Development of skills in free-hand sketching, lettering and preparation of presentation, submission and working drawings and detailed thereof	• Basic Design and Sketching • Interior Design • Building Construction and Material • Interior Services (Plumbing, Electrical & AHU services)
2.	Development of basic knowledge and skills for preparing small building designs and layouts	• Interior Design • Interior Services (Plumbing, Electrical & AHU services) • Building construction and Material
3.	Development of skills in model making using different materials	• Interior Design • 3D volume and model making
4.	Development of knowledge and skills in designing and detailing of various furniture and the application with knowledge of Anthropometrics	• History of Interior and furniture • Product Design • Interior Design
5.	Development of knowledge and skills in site management comprising of measurement, surveying, and inspection	• Building construction and Material • Professional Practice • Field exposure
6.	Development of basic knowledge and skills in preparing tender documents, rough estimates and also preparation of detailed estimates for small building Interiors	• Costing and Estimation
7.	Development of skills in taking out prints, cloth mounting, colouring and folding of prints/ plots and their upkeep	• Interior Design • Introduction to Information Technology
8.	Appreciation of basic knowledge about elements and principles of theory of design, knowledge of trends n styles, fabrics, traditional and modern art styles, folk art, handicrafts	• Interior Design

9.	Appreciation of basic knowledge about designing of utilities and various products to make users life simple and convenient	• Product Design
10	Development of basic knowledge regarding various building materials and construction techniques	• Building Construction and Material • Professional practice
11	Development of basic knowledge regarding various display options and techniques, knowledge of signage and to understand the importance of commercial display of products, Exhibitions, pavilion design	• Interior Design • Portfolio/Display • Product Design
12	Development of basic knowledge of history of Interior and Furniture, Architectural features, planning and Interior drawings with emphasis on computer techniques	• Computer Aided Design • History of Interior and furniture
13	Development of basic knowledge and skills in applications of computers in architecture	• Computer Aided Design • Introduction to Information Technology
14	Development of basic understanding of resource systems helping in the financing of small enterprises	• Professional Practice
15	Development of basic knowledge of climatology, environment, Energy conservation and ecology	• Interior Services (Plumbing, Electrical & AHU services) • Environmental Studies •
16	Understanding the behavior of structural elements of building and to be aware about the renovation techniques of buildings	• Building Construction and Material • Interior Design
17	Development of basic understanding of building services	• Interior Services (Plumbing, Electrical & AHU services) • Interior Design
18	Development of communication and soft skills	• Communication Skills • Life skills

19	Development of basic hand-on practice skills	• Workshop Practice
20	Demonstrate appropriate values and attitude.	• Life skills

6. ABSTRACT OF THE CURRICULUM AREAS

a) General Studies

1. Communication Skills-I and II
2. Introduction to Information Technology
3. Environmental Studies
4. Development of Life skills
5. Professional Practice

b) Basic Courses in Interior

6. Basic Design and Sketching
7. History of Interior and Furniture-I and II

c) Applied Courses in Interior / Technology

8. General Workshop Practice- I and II
9. 3D volume and model making
10. Building Construction and Material-I, II, III and IV
11. Interior Design-I, II, III and IV
12. Interior Services (Electrical, Plumbing, HVAC, Fire Fighting)- I & II
13. Product Design- I and II
14. Computer Aided Design-I, II and III (Software Applications in Interior Design)
15. Costing and Estimation- I and II
16. Industrial Visit
17. Portfolio/Display
18. Thesis (Major Project)

TOTAL MARKS AND CREDIT DISTRIBUTION FROM 1ST to 6TH Semester

Semester	Marks	Credit
1st semester	625	26
2nd semester	800	31
3rd semester	800	27
4th semester	725	25
5th semester	500	24
6th semester	625	27
TOTAL	**4075**	**160**

FIRST SEMESTER/TERM-I

Sl. No	Code	Course	Study Scheme			Evaluation Scheme				Total Marks	Credit
			Contact Hours /Week			Theory		Practical			
			L	T	P/ drg	End Exam	Progressive Assignment	End Exam	Progressive Assignment/ Viva		
1	*G101	Communication Skill - I	2	0	2	75	25	25	-	125	3
2	ID101	Basic Design and Sketching	4	0	4	75	25	-	-	100	6
3	ID102	History of Interior Design - I	4	1	4	75	-	-	25	100	6
4	*G205A	Introduction to Information Technology - I	2	0	4	50	-	25	25	100	4
5	ID103	3D volume and model making	-	-	4	-	-	50	25	75	2
6	ID104	Building Construction and Materials - I	3	1	4	75	25	-	25	125	5
		Total	**15**	**2**	**22**	**350**	**75**	**100**	**100**	**625**	**26**

*Common with other diploma programs

L- Lecture

T- Tutorial

P- Practical/ Drg- Drawing

SECOND SEMESTER/TERM-II

Sl. No.	Code	Course	Study Scheme			Evaluation Scheme				Total Marks	Credit
			Contact Hours /Week			Theory		Practical			
			L	T	P/ drg	End Exam	Progressive Assignment	End Exam	Progressive Assignment/ Viva		
1	*G102	Communication Skill-II	2	0	2	75	25	25	-	125	3
2	ID201	Building Construction & Material – II	3	1	4	75	25	-	25	125	5
3	ID202	Interior Design – I (Residences)	4	1	4	25	25	75	25	150	6
4	ID203	History of Interior Design-II	4	1	4	75	-	-	25	100	6
5	ID204	General Workshop Practice – I	0	0	8	-	50	50	-	100	4
6	ID205	Interior Services – I (Electrical & Plumbing)	3	-	2	75	25	-	-	100	4
7	ID206	Professional Practice-I	-	1	2	-	-	-	50	50	1
8	*G301	Development of life skills I	1	0	2	-	-	-	50	50	2
		Total	**17**	**4**	**28**	**325**	**150**	**150**	**175**	**800**	**31**

*Common with other diploma programs

L- Lecture

T- Tutorial

P- Practical/ Drg- Drawing

THIRD SEMESTER/TERM-III

Sl. No.	Code	Course	Study Scheme			Evaluation Scheme				Total Marks	Credit
			Contact Hours /Week			Theory		Practical			
			L	T	P/ drg	End Exam	Progressive Assignment	End Exam	Progressive Assignment/ Viva		
1	ID301	Interior Services II (HVAC & Fire Fighting)	3	0	2	75	25	0	0	100	4
2	ID302	Product Design-I	2	1	4	50	25	0	25	100	4
3	ID303	Interior Design – II (Restaurants)	3	1	2	25	25	75	25	150	4
4	ID304	Computer Application-I (CAD)	2	0	4	0	25	50	25	100	4
5	ID305	Building Construction and Materials III	3	1	2	75	50	0	25	150	4
6	ID306	General Workshop Practice-II	0	0	8	0	50	50	0	100	4
7	ID307	Professional Practices-II	0	1	2	0	0	0	50	50	1
8	*G302	Development of life skills-II	1	0	2	0	0	0	50	50	2
		Total	**14**	**4**	**26**	**225**	**200**	**175**	**200**	**800**	**27**

*Common with other diploma programs

L- Lecture

T- Tutorial

P- Practical/ Drg- Drawing

FOURTH SEMESTER/TERM-IV

Sl. No.	Code	Course	Study Scheme			Evaluation Scheme				Total Marks	Credit
			Contact Hours /Week			Theory		Practical			
			L	T	P/ drg	End Exam	Progressive Assignment	End Exam	Progressive Assignment/ Viva		
1	ID401	Costing and Estimation I	3	1	0	50	25	0	0	75	3
2	ID402	Product Design-II	2	1	4	50	25	0	25	100	4
3	ID403	Interior Design – III (Retail Outlet)	4	1	2	25	25	75	25	150	5
4	ID404	Computer Application-II (CAD and Sketchup)	2	0	4	0	25	50	25	100	4
5	ID405	Building Construction and Materials IV	3	1	4	75	50	0	25	150	5
6	ID406	Professional Practices-III with Industrial Visit	0	1	2	0	0	0	50	50	1
7	ID407	Environmental Studies	3	0	0	75	25	0	0	100	3
		Total	**17**	**5**	**16**	**275**	**175**	**125**	**150**	**725**	**25**

L- Lecture

T- Tutorial

P- Practical/ Drg- Drawing

FIFTH SEMESTER/TERM-V

Sl. No.	Code	Course	Study Scheme			Evaluation Scheme				Total Marks	Credit
			Contact Hours /Week			Theory		Practical			
			L	T	P/ drg	End Exam	Progressive Assignment	End Exam	Progressive Assignment/ Viva		
1	ID501	Costing and Estimation II	3	1	0	50	25	0	0	75	3
2	ID502	Interior Design – IV (Office Spaces)	4	1	4	25	25	75	25	150	6
3	ID503	Computer Application-III	4	0	4	50	25	0	25	100	6
4	ID504	Portfolio/Display	3	0	4	0	25	50	0	75	5
5	ID505	Professional Practice-IV	0	1	2	0	0	0	50	50	1
6	ID506	Universal Human Values	2	0	2	0	0	0	50	50	3
7	IBT	Industrial Training (Internship)	Industrial training to be conducted around the winter break in 5th semester. Training report and viva to be assessed and marked in the 6th semester mark sheet.								
		Total	**16**	**3**	**16**	**125**	**100**	**125**	**150**	**500**	**24**

L- Lecture

T- Tutorial

P- Practical/ Drg- Drawing

SIXTH SEMESTER/TERM-VI

Sl. No.	Code	Course	Study Scheme			Evaluation Scheme				Total Marks	Credit
			Contact Hours /Week			Theory		Practical			
			L	T	P/ drg	End Exam	Progressive Assignment	End Exam	Progressive Assignment / Viva		
1	ID601	Thesis (Major Project)	4	0	12	0	50	100	50	200	10
2	ID602	Portfolio	3	0	4	0	25	50	0	75	5
3	ID603	Professional Practices-V	0	1	2	0	0	0	50	50	1
4	ID604	Basics of Management and Entrepreneurship development	3	0	0	75	25	0	0	100	3
5	IBT	Industrial Training (Internship)	0	0	0	0	0	0	200	200	8
		Total	**10**	**1**	**18**	**75**	**100**	**150**	**300**	**625**	**27**

L- Lecture

T- Tutorial

P- Practical/ Drg- Drawing

DETAILED THEORY CONTENT

SEMESTER I

(G101)- COMMUNICATION SKILL-I KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Communication	-	3	5	8
2	Reading & Remedial grammar usage	-	5	5	10
3	Preparation for writing	-	5	2	7
4	Writing paragraphs	6	5	2	13
5	Comprehension of technical text manuals, instructions, etc.	-	4	4	8
6	Listening	-	4	3	7
7	Public speaking	5	3	2	10
8	Presentation	5	5	2	12
GRAND TOTAL					75

NAME OF THE SUBJECT : COMMUNICATION SKILL -I			
Course code: G101			**Semester: First, Total: 125 marks**
Theory:	2	hrs/week	Theory PA: 25 marks
Tutorial:	0	hrs/week	Practical End Exam: 25marks
Practical:	2	hrs/week	End Semester Theory: 75 Marks Practical PA/Viva: 0 Marks
Credit:	3		

RATIONALE:

English is not our mother tongue, nor do most of us live in an atmosphere of English. In schools you read English as a *subject* and the main reason behind your reading, for many of you, was simply to pass the examinations.

Now, in the job-oriented education, learners need to learn English not as a subject but as a *service language*- serving as a vehicle for his/her educational as well as professional needs.

These are needs for communication. They need to write reports, read instructions and manuals for setting up a machine perfectly and speak to clients for more orders.

So, this subject will help to develop reading skills, listening skills, speaking skills and writing skills while using appropriate grammar in reading, writing and speaking. It will enable the learner to use them more confidently in their communicative activities. Learners will be able to read by themselves text and reference books, articles, different government orders, various letters, non- text materials like charts, diagrams, brochures, technical reports and other writings which not only claim Factual comprehension but demand higher levels of comprehension involving inference and evaluation etc. It will enable learners to listen, understand and respond appropriately.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical and revision.

Lecture per week- 2hrs

Total Lecture per semester- 28hrs

1.0 COMMUNICATION: (03 lecture hours, 08 marks)

1.1 Communication and Communications
1.2 Features of Communication
1.3 Essential Components of Communication
1.4 Barriers of Communication
1.5 Types of Communication
1.6 Essential Elements of Effective Communication

2.0 EADING AND REMEDIAL GRAMMAR USAGE: (04 lecture hours, 10 marks)

.1 Developing Reading Skills
2.2 Skimming – Scanning – Reading for information structure

2.3 Remedial Grammar

- Time and Tense – Transformation of Sentences
- Relative Clauses
- Language Function: Reporting, Suggesting,
- Agreeing, Defining, Purpose, Instruction,
- Prohibition

3.0 PREPARATIONFORWRITING: (03 lecture hours, 07 marks)

3.1 Understanding the writing assignment: topic, purpose, reader, scope and constraints.
3.2 Analyzing the content.
3.3 Determining the scope of topic.

3.4 Audience analysis for entry behavior
3.5 Collecting information for the assignment.

4.0 WRITINGPARAGRAPHS: (05 lecture hours, 13 marks)

4.1 Identifying Paragraphs
4.2 Essentials of effective coherent paragraphs
4.3 Use of appropriate linkers in paragraphs
4.4 Developing notes into a paragraph.
4.5 Identifying and Writing Topic Sentences and Supporting Sentences
4.6 Recognizing different types of paragraphs organization.
4.7 Use of appropriate tenses, voices and linkers in paragraphs
4.8 Writing different types of paragraphs.

- Process description
- Comprehension and contrast
- Cause and Effect
- Problem Solution

5.0 COMPREHENSION OF TECHNICALTEXTSMANUALS, INSTRUCTIONS ETC. (03 lecture hours, 08 marks)

5.1 Recognizing important information in written texts.
5.2 Note – taking with the use of abbreviations, charts, diagrams and Symbols.
5.3 Interpreting with visuals and illustrating with visuals like tables, charts and graphs.

6.0 LISTENING: (02 lecture hours, 07 marks)

6.1 Importance of Active Listening
6.2 Functions of Active Listening
6.3 Techniques for ensuring Active Listening

7.0 PUBLIC SPEAKING: (03 lecture hours, 10 marks)

7.1 Planning for the speech
7.2 Designing the speech
7.3 Deliver the speech
7.4 Evaluate the speech.

8.0 PRESENTATION: (05 lecture hours, 12 marks)

8.1 Rationale of Presentation
8.2 Types of Presentations
8.3 Planning of Presentation
8.4 Guidelines for use of visual aids
8.5 Practice of Presentation on relevant topics

SUGGESTED LEARNING RESOURCES: Reference Books:

1. English for Specific Purposes: A learning – Centered approach
2. Hutchinson, Tom and Waters, A lan, CUP1987
3. The Second Language Curriculum: Ed. Robert Keith Johnson, CUP1989
4. Designing Tasks for the Communicative Classroom: David Nunan, CUP1989
5. Writing English Language Tests: J. B. Heaton Longman Group, U K Limited1988
6. Writing Matters: Kristine Brown & Susan Hood, CUP1989
7. In at the deep end: Vicki &Hollett, OUP1989
8. Teaching the Spoken Language: G. Brown and G. Yule CUP1983
9. ENGLISH SKILLS for Technical Students – TEACHERS' HANDBOOK / West Bengal State Council of Technical Education in collaboration with THE BRITISH COUNCIL / Orient Longman.

(ID101)- BASIC DESIGN AND SKETCHING KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Introduction	-	6	3	9
2	Design	10	3	2	15
3	Elements of Design	5	4	3	13
4	Principles of Design	6	3	1	10
5	Anthropometrics & Ergonomics Studies	5	5	3	13
6	Sketching	10	5	-	15
GRAND TOTAL					75

NAME OF THE SUBJECT : BASIC DESIGN AND SKETCHING			
Course code: ID101			**Semester: First**
Teaching Scheme			**Total Marks:100**
			PA and End Examination Scheme
Theory:	4	hrs/week	Theory PA: 25 marks
Tutorial:	0	hrs/week	Practical End Exam: 0marks
Practical:	4	hrs/week	End Semester Theory: 75 Marks Practical PA: 0 Marks
Credit:	6		

RATIONALE:

Art and basic design are the foundation and first steps for the beginners who enter the field of interior design and decoration. For performing this knowledge of principles and elements of design and design methodology is required. Following points should be discussed in relation with design.

LEARNING OUTCOMES

After completing the course, the students will be able to:

- Identify Drawing tools and Mediums used and their respective functions.
- Developing art and sketching skills of live objects, buildings and landscapes.
- Developing a visual literacy about our surroundings.
- Developing a sense of appreciation for the built environment
- Identifying the use of various elements and principles in the design
- Effectively using the various measurement systems on the drawing.
- To develop an art of visualizing 3-D objects through their 2-D drawings and projections

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical and revision.

Lecture per week- 4hrs
Total Lecture per semester- 56hrs

1.0 INTRODUCTION: (04 Lecture hours, 09 marks)

1.1 Medium of expression: Pencil, Ink, Crayons, Types of colors.
1.2 Tools and materials: T-square, Set-square, Drawing board, Compass, Liner equipment's for creating texture.
1.3 Visual, Performing art for expression, entertainment and commercial propaganda.

2.0 DESIGN: (10 Lecture hours, 15 marks)

2.1 Definition, Functional design, Traditional design, Folk, and modern design. Purpose of design, all this must be supported with examples from everyday life and nature.

3.0 **ELEMENTS OF DESIGN: (12 Lecture hours, 13 marks)**

3.1 **LINE**: Its emotional effect, direction, shape, size, form, value, and color.
Type of line, Straight, Vertical, Horizontal diagonal, curve.

3.2 **COLOR:** Classes of color according to prang system, Primary, Secondary, Intermediates, Tertiary, Quaternary. Standard system of color, arrangement and notation, Theories of color, Principles and practice of color, relation of color to shape, Scale and proportion, Color harmony. Physiological aspects of color, Hue war, Name of color, Cool, advancing, and receding colors. value scale, lightness and darkness, tint and shades and color intensities. Color schemes (6 different types); Simple exercises on making color charts, value, scales, Color. schemes for different interiors. Practice in color matching. Standard color harmonies, related color harmony, Color harmony and contrast, Law of color, Munsell color system.

3.3 **PATTERN, TONES, AND TEXTURE:**
Shapes and patterns derived from natural forms, Textures of surface and their appearance, geometric forms, symmetry and asymmetry, ornamentation and abstraction, surface quality and light variations, articulation of planes, area division according to tones, Art exercises, Compositions in geometric shapes, patterns, tones textures variations.

4.0 PRINCIPLES OF DESIGN: (08 Lecture hours, 10 marks)
Proportion, Scale, Balance, Contrast, Harmony/ Rhythm and Emphasis, Unity and duality: simple exercises based on above principles be discussed and drawings to be made.

4.1 **BALANCE**: Definition, Types of formal and informal balance by symmetric and obvious.

4.2 **HARMONY:** Definition, aspect of harmony, Line, shape, Size, texture, Color idea.

4.3 **RHYTHM:** Definition, Methods of obtaining rhythm, Repetition of shapes, Progression of size, Continuous line movement, Radiation.

4.4 **EMPHASIS(Focus)**: Definition, how to emphasize, grouping of objects using. contrasting colors, using decoration having sufficient plain background using unusual lines, Shapes, Sizes.

5.0 ANTHROPOMETRICS & ERGONOMICS STUDIES: (12 Lecture hours, 13 marks
Anthropometrics Study of human body and its movement along with the relationship with the environment.

6.0 SKETCHING: (10 lecture hours, 15 marks)
6.1 Natural environment, Leaves, Flower, Tree, Living forms and organism, Human form, Structure and proportion, Manmade sources, Architectural forms, Buildings, Interiors and furniture. Use of variety of sketching materials- pencil, pen, ink crayon, watercolor, quick drying inks. All drawings to be made directly from the subject and not from illustrations.
6.2 Free hand sketching of interiors in different media both black and white and in colors.

NOTE:

No examination question from sketching. The aim here is to familiarize the students with various sketching techniques and materials and thereby develop an acumen for sketching through observation of both the natural and man-made environment. Ultimately these sketching techniques shall help to develop the students design ability.

INSTRUCTIONAL STRATEGY

Student should be encouraged to participate in role play and other student-centered activities in classroom and actively participate in Pencil diagram and sketching exercises. The student should be encouraged to draw on daily basis, at least 2 sketches of any object/ natural surroundings/ Human sketch/ buildings/ interior sketches in the sketchbook.

MEANS OF ASSESSMENT

- Assignments and quiz/class tests, mid-semester and end-semester written tests.
- Actual practical work, exercises, and viva-voce
- Presentation on the drawing sheets

RECOMMENDED BOOKS

1. "Rendering with Pencil and Ink" by Gill Robert W., Published by Thomos and Hudson, New Delhi
2. "Interior Design" by Ahmed A. Kasu, Published by Sunrise Publisher, New Delhi
3. "Architectural Aesthetics" by Sangeet Sharma, Abhishek Publication, 57-59, Sector 17, Chandigarh
4. "Learning Curves" by Klara Sjolen and Allan Mcdonalds by Perfect Paperback Publishers.
5. "The Complete Book of Drawing" by Barrington Barber by Perfect Paperback Publishers.

(ID102)- HISTORY OF INTERIOR DESIGN-I KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Architectural and Interior Characteristics of Egyptian, Green and Roman period	10	6	3	19
2	Architectural and Interior characteristics of Buddhist, Hindu and Muslim period	6	6	3	15
3	Chinese and Japanese	10	4	-	14
4	Architectural elements in India from Mughal period to date	6	5	3	14
5	Study of period of furniture and ornamentation	6	4	3	13
GRAND TOTAL					75

NAME OF THE SUBJECT : HISTORY OF INTERIOR DESIGN 1			
Course code: ID102			**Semester: First**
Teaching Scheme			**Total Marks:100**
			PA and End Examination Scheme
Theory:	4	hrs/week	Theory PA: 0 marks
Tutorial:	1	hrs/week	Practical End Exam: 0 marks
Practical:	4	hrs/week	End Semester Theory: 75 Marks Practical PA: 25 Marks
Credit:	6		

RATIONALE:

The past work is always the foundation for progress. The knowledge of past achievements in any field is helpful for improvement and renovation. So, the course objective here is to give the students a sense of historical development in this field to appreciate the past skills, technology and materials used in the field of interior decoration.

LEARNING OUTCOME

- The course on History of Architecture develops appreciation regarding past and current trends in the field of architecture.
- The knowledge of this course will help the students to understand how political, physical, social, economic, and technological change affect the architecture, materials and construction techniques. The course covers broad topics like pre- historic architecture, (Indian, Egyptian, Greek, and Roman), medieval architecture in Europe, and Buddhist architecture in India.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's, smart classes, and revision.
Lecture per week- 4hrs
Total Lecture per semester- 56hrs

1.0 ARCHITECTURAL AND INTERIOR CHARACTERTICS OF EGYPTIAN: (12 Lecture hours, 19 marks)

GREEK AND ROMAN PERIOD:

Concept and architectural characteristics of Egyptian, Greek and Roman interior with special emphasis on decoration, Ornamentation, Motifs and furniture.

2.0 ARCHITECTURAL AND INTERIOR CHARACTERISTICS OF BUDHIST: (10 Lecture hours, 15 marks)

HINDU & MUSLIM PERIOD:

Architectural characteristics of Buddhist, Hindu and Muslim with special emphasis on decoration, Ornamentations, Motifs and furniture.

3.0 CHINESE AND JAPANESE: (10 Lecture hours, 14 marks)

Chinese and Japanese interior and furniture.

4.0 ARCHITECTURAL ELEMENTS IN INDIA FROM MUGHAL PERIOD TO DATE: (12 lecture hours, 14 marks)

Study of architectural elements in interiors in India from Mughal period onwards such as doors, windows, pillars, columns, staircases, fireplaces, paneling, dado, frieze, architectural decoration, study sketches and creative designs.

5.0 STUDY OF PERIOD OF FURNITURE ANDORNAMENTATION: (12 lecture hours, 13 marks)

5.1 History of furniture - European (Starting from renaissance onwards)

5.2 Period style - Italian, British and French.

5.3 Renaissance and its influence on ornamentation and furniture.

5.4 Modern furniture and ornamentation Furniture Design by architect FLW, Li- Corbusier, Mies, Alver, Alto, Charl Eames, Marchel Breur.

5.5 Modern Furniture (1900 onwards), Modular, Steel &Glass.

NOTE:

1. Emphasis should be given to interior aspects of buildings.
2. For paper setter- Question must be framed on theory asking students to answer with sketches, to assess the artistic skill earned during studies by the students.

INSTRUCTIONAL STRATEGY

While imparting instructions in this subject, the teachers should organize site visits to the old monuments and buildings with extra-ordinary Architectural and Interior features.

Experts/Guides from state and national Archaeology departments may be invited to deliver lectures on the relevant themes in order to generate interest in the students. Audio-visual material available on the subject, in the country and abroad, may be procured and presented to the students from time to time to enrich the quality of classroom institutions. Special Interior and Architectural features of some old/ historical famous Indian and International buildings may be presented to the students as case studies. Students may be encouraged to prepare case studies of at least one famous old/historical building. Web sites, relevant to the history of architecture may be visited by the teachers and students.

RECOMMENDED BOOKS

1. History of Architecture by Sir Banister Fletcher, Architectural Press, Oxford, UK
2. Indian Architecture (Hindu Period) by Percy Brown, Read Books Design,2010
3. Indian Architecture (Hindu and Buddhist Period) by Satish Grover, Vikas Publishers, New Delhi
4. Encyclopedia of Architecture, (ed) Dennis Sharp, Mc. Graw Hiss Publishers, New Delhi
5. History of Indian Art by Sandhya Ketkar and Anil Rao, Publishers; Jyotsana Prakashan
6. The Great Ages of world architecture by G.K.Hiraskar, Publishers; Dhanpat Rai Publishing Co Pvt. Ltd.

(G205A)- INTRODUCTION TO INFORMATION TECHNOLOGY KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Introduction to IT	-	3	2	5
2	Introduction to Number systems, bits, etc	-	5	5	10
3	Introductory ideas about the components of computer	5	4	4	13
4	Classification of software	-	6	4	10
5	Computer communication interface, introductory concepts of networking.	5	4	3	12
GRAND TOTAL					50

NAME OF THE SUBJECT : INTRODUCTION TO INFORMATION TECHNOLOGY			
Course code: G205A			**Semester: First**
Teaching Scheme			**Total Marks:100**
			PA and End Examination Scheme
Theory:	2	hrs/week	Theory PA: 0 marks
Tutorial:	0	hrs/week	Practical End Exam: 25marks
Practical:	4	hrs/week	End Semester Theory: 50 Marks Practical PA: 25 Marks
Credit:	4		

RATIONALE:

Information Technology is an in-evitable part now-a-day. The discipline of Engineering is also being highly influenced by the recent development in the field of IT. This course emphasizes of the various components of Information Technology. The course deals with Hardware, Software and Communication technologies in brief that are the foundation of IT. It therefore becomes important for the students to understand the concept and develop necessary skills in different aspects of information technology.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's and revision.
Lecture per week- 2hrs
Total Lecture per semester- 28hrs

1.0 Introduction to IT - its components computer, communication& Management. **(03 Lecture hours, 05 marks)**

2.0 Introduction to Number System, Bits, Bytes, Word, Logical Gates, Truth Table, ASCII, BCD, Floating point and Fixed-Point number representation. **(06 Lecture hours, 10 marks)**

3.0 Introductory ideas about the components of computer- Hardware, Central Processing Unit, Input Unit, Output Unit, Memory Unit, Auxiliary Unit, Peripherals - Monitor, Keyboard, Mouse, Printer, Hard disk, CD/ DVD, USB storage devices, Micro SD Cards, etc. Software and firmware building blocks of a computer, its function, and its use. Role of operating system. **(08 Lecture hours, 13 marks)**

4.0 Classification of software – System Software, Application Software Translator –Compiler, Interpreter, Preprocessor Operating System - Single User, Multiple User Windows XP/Vista / 7 / 8 - Definition of Windows, Windows element, Concept of Graphical user Interface, Concept of Icon, Working with File Management, Concept of GUI based software, concept of client & server, concept of www, Internet services, use of standard browsers, basics of HTML and searching. **(06 Lecture hours, 10 marks)**

5.0 **Computer communication interface**, introductory concepts of networking, Transmission media – Wired and Wireless, use of Modem Concept of LAN, WAN, Internet, Intranet, Email **(07 lecture hours, 12 marks)**

PRACTICAL: (25 marks)

Suggested demonstration / tasks:

1**. Introduction to MS Office (01 mark)**

Basic features of MS Office, Overview of Different Office Tools

2.**Introduction to MS Word (07 marks)**

Creating and Editing document, Formatting Documents, Working with Tables, Spell checking, Mail Merging, Importing Graphics into word Document

3.**Introduction to MS Excel (07 marks)**

Creating a New Workbook, Entering Labels, Values and Formulas, Formatting the layout, Working with Functions, Creating the Chart from data, Writing macros

4.**Introduction to PowerPoint (06 marks)**

Creating a Presentation, Adding/Editing Text, working with objects, Formatting the Presentation, Placing the chart in slide, Slide Show and Printing

5.**Internet Browsing and Emailing (04 marks)**

Internet surfing and browsing, searching content from the Internet using search engines, Email – account opening, composition of e-mails, searching mails, forward and reply of emails

(ID103)- 3D VOLUME AND MODEL MAKING (PRACTICAL) KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL (PRACTICAL END EXAM)
1	Introduction	5
2	Building models	6
3	Interior model making	7
4	Tools and materials	7
GRAND TOTAL		25

NAME OF THE SUBJECT : 3D VOLUME AND MODEL MAKING			
Course code: ID103			**Semester: First**
Teaching Scheme			**Total Marks:75**
			PA and End Examination Scheme
Theory:	0	hrs/week	Theory PA: 0 marks
Tutorial:	0	hrs/week	Practical End Exam: 25marks
Practical:	4	hrs/week	End Semester Theory: 0 Marks Practical PA: 50 Marks
Credit:	2		

RATIONALE:

Student of Interior Design at diploma level are expected to assist in the preparation of models of various kind in their professional career. This skill can also be used for basic of self- employment. Models as three-dimensional representations are made in different mediums. The student should be acquainted with all these mediums.

DETAILED CONTENTS: Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's and revision.
Practical per week- 4hrs
Total Practical hours per semester- 56 hrs

1.0 INTRODUCTION: Draw developmental drawings to appropriate scale of different geometrical shapes/objects. (05 Marks)

2.0 BUILDING MODELS: (06 marks)
Preparing a model based on the composition of prisms, Cubes, cylinders, etc. Introduction to model making and its need. Role of scale-models in design.

3.0 INTERIOR FURNITURE / PRODUCTS MODEL MAKING: (07 marks)
Prepare scale down models of interior furniture / products to demonstrate skill, workmanship, preciseness to enhance visualization of drawings to reality (Model) Using Cardboard/Wood/Thermocol/Cork/Plaster of Paris/Photo mountboard etc.

4.0 TOOLS AND MATERIALS: (07 marks) Various materials and tools to be used in model making. Use of materials, viz. paper, mount board, cardboard, wood, plastics, films, plaster of Paris, acrylic, Styrofoam, wax, metals, glass, etc. and exploring their potential in model-making.

Course outcome: With the successful completion of the course student will be able to review various tools and techniques for model making and design and model for real life situation.

Note: *Students are required to make and explain scaled down furniture / products during their viva voce being designed in this semester in 3D volume and model making.*

(ID104)- BUILDING CONSTRUCTION AND MATERIALS-I KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Elementary building materials	-	06	04	10
2	Timber	-	04	05	09
3	Construction	05	04	03	12
4	Brick foundations and D.P.C.	-	06	04	10
5	Arches and lintels	05	03	02	10
6	Doors and windows	05	06	03	14
7	Types of roofs	-	06	04	10
GRAND TOTAL					75

NAME OF THE SUBJECT :	BUILDING CONSTRUCTION & MATERIALS 1
Course code: ID104	**Semester: First**
Teaching Scheme	**Total Marks:125**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 0marks
Practical: 4 hrs/week	End Semester Theory: 75 Marks Practical PA: 25 Marks
Credit: 5	

RATIONALE:

The subject deals with the properties and uses of different elementary building materials like brick, stone, timbers etc. and the construction principles of various components of buildings like foundation, masonry, lintels, etc. The knowledge of working materials is a must for a designer. The paper aims at fulfilling the need. The aim is to develop an understanding of the behavior and function of various components of buildings. For this it is essential that the students are taught the various components of building such as foundations, floors, super structure, joints, opening, roofs etc. The first-year timber construction and RCC will be dealt with.

Teachers must supplement their lectures with models, audio-visuals and on-site study of various building components. For drawing work, stress must be laid on scale, dimensioning, lettering, and composition of the drawing. At the end of the first year, the students should be able to draw a complete vertical section through a simple single storied flat roof building. The subject teacher shall introduce the theory component of the topic to the students before drawing sheets are attempted by the students.

LEARNING OUTCOMES

After undergoing the subject, the students will be able to:

- Classify rocks and identify stones.
- Classify different types of bricks and Blocks.
- Perform laboratory tests of cement to determine properties of cement.
- Identify types of defects of timber
- Select paints/varnishes for various types of surfaces.
- Identify and use different types of metals/alloys.
- Select different materials used for wall paneling and false ceiling, such PVC, POP etc.
- Select other materials commonly used for contemporary buildings.

Note: The theoretical constructions should be imparted to the students along with building construction drawings.

Detailed Teaching Scheme:
Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's, smart classes and revision.

Lecture per week- 3hrs
Total Lecture per semester- 42 hrs

1.0 ELEMENTRY BUILDING MATERIALS (06 Lecture hours, 10 marks)
Brick, Stone, Lime, Cement and Concrete.

2.0 TIMBER: (04 lecture hours, 09 marks)
Defects and decay, seasoning preservation and different varieties of Timber.

3.0 CONSTRUCTION: (08 lecture hours, 12 marks)
Elements of Building:
Terminology, Nomenclature of various parts of building from foundation of roof which supports to making a complete wall section from foundation of parapet. General principles of construction in brick toothing, brick on edge and brick on end etc., Bats and closers, Bonds in Brick work, stretching bond, English bond, double and single Flemish Bonds etc. in different types of mortars.

4.0 BRICK FOUNDATIONS &D.P.C.: (06 lecture hours, 10 marks)
Definition and purpose of foundations, Introduction to different types of foundations. Timbering to trenches for foundations. Study of simple strip foundations for load bearing walls and piers, method of laying D. P.C.

5.0 ARCHES &LINTELS: (04 lecture hours, 10 marks)
Definition & terms used in Arches, construction of Arches in brick and stone. Different types of lintels.

6.0 DOORS &WINDOWS: (08 lecture hours, 14 marks)
Introduction to joints in carpentry and various types of doors &windows, construction of door/window frames. Introduction of Batten doors, Ledged and batten doors and Ledged, Braced and batten doors, Details of Paneled doors, and Flush doors. Details of hardware related to these doors.

7.0 TYPES OF ROOFS: (06 lecture hours, 10 marks)
Introduction to different types of roofs roof covering with their suitability to various functions e.g., flat, couple, close couple, Lean to and double lean-to roof. Roof coverings with thatch, slate and tile.

PRACTICAL EXERCISES

i. Identification of different types of building materials.
ii. Different types of bonds in brick masonry.
iii. To identify the stones used in building works by visual examination.
iv. To determine the water absorption of bricks and efflorescence of bricks
v. To identify various types of timbers such as: Teak, Sal, Chir, Shisham, Deodar, Kail &Hollock by visual examination only.
vi. The students should submit a report work on the construction materials, covering water proofing

material, cements, steel, paints and timber products available in the local market. They will also show the competitive study based upon the cost, brand name, sizes available in the local market. The studio and workshop periods are devoted to the solution of simple construction problems and details.
Note: Total minimum of 10 sheets to be assigned.

INSTRUCTIONAL STRATEGY:

Teachers are expected to physically show various materials while imparting instructions. Field-visits should also be organized to show manufacturing processes and use of various materials in Civil engineering works. Students should be encouraged to collect sample of various building materials to create a museum of materials in the polytechnic. The emphasis should be one selection and application of materials as per the need of environment.

MEANS OF ASSESSMENT

i. Assignments and quiz/class tests
ii. Mid and end-term written tests.
iii. Model/prototype making.

RECOMMENDED BOOKS

1. Building Construction (Vol I, II, III and IV) by WB Mckay; Longman Publication, Khanna Publisher, New Delhi
2. Building Construction by SP Bindra and SP Arora; publisher Dhanpat Rai & Co. New Delhi
3. Building Construction by BC Punmia; Publisher Laxmi Publication, New Delhi
4. Building Construction by Sushil Kumar, Standard Publisher, New Delhi
5. Construction of Buildings (Vol I and II) by Barry
6. Building Construction by VB Sikka; Publisher Tata McGraw Hill Publisher, New Delhi
7. Building Construction by Rangwala; Publisher Charotar Publishing House Pvt. Ltd., new Delhi
8. A Course in Civil Engineering by V.B.Sikka,PublishedbyTataMcGrawHill Publisher, New Delhi
9. Sharma, SK; and Mathur, GC; "Engineering Materials;" Delhi-Jalandhar,S. Chand and Co.
10. Surendra Singh; "Engineering Materials;" New Delhi, Vikas Publishing House Pvt. Ltd.
11. Choudhary, N; "Engineering Materials;" Calcutta, Technical Publishers of India.
12. Gurcharan Singh; Engineering Materials, Standard Publishers Distributors, New Delhi

SEMESTER II

(G102)- COMMUNICATION SKILLS-II KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Essentials of business correspondence	-	2	3	05
2	Business letters	5	3	2	10
3	Job application letters	5	3	-	08
4	Meeting agendas and minutes	5	-	-	05
5	Memos	5	2	-	07
6	E-mails	5	-	2	07
7	Technical report writing	6	4	3	13
8	Job Interviews	-	6	4	10
9	Group discussions	-	10	-	10
GRAND TOTAL					75

NAME OF THE SUBJECT : COMMUNICATION SKILLS-II			
Course code: G102			**Semester: Second**
Teaching Scheme			**Total Marks:125**
			PA and End Examination Scheme
Theory:	2	hrs/week	Theory PA: 25 marks
Tutorial:	0	hrs/week	Practical End Exam: 25marks
Practical:	2	hrs/week	End Semester Theory: 75 Marks Practical PA/Viva: 0 Marks
Credit:	3		

RATIONALE:

This subject will help to identify essentials of business correspondence. It will enable the learner to use them more confidently in their communicative activities. Learners will be able to write letters asking for application forms, fill in the application forms. They will be able to prepare a resume or a CV, write letters of application in response to advertisements, learn how to write technical reports, memos and they will be able to prepare themselves for job interview and group discussion.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's and revision.

Lecture per week- 2hrs

Total Lecture per semester- 28hrs

1.0 ESSENTIALS OFBUSINESS CORRESPONDENCE (02 Lecture hours, 05 marks)

- Introduction
- Simplicity
- Clarity
- Brevity
- Courteous
- Persuasive
- Sincerity
- Tactful approach

2.0 BUSINESS LETTERS (03 lecture hours, 10 marks)

1. Introduction
2. Different types of Business Letters

- Letters of Enquiry
- Letters of Placing Orders
- Letters of Complaints
- Letters in response Letters of Enquiry, Placing Orders and Complaints
- Letters in response to Tender Notices (samples of effective letters referred to above are to be shown to students)

3.0 JOB APPLICATION LETTERS (03 lecture hours, 08 marks)

- Introduction
- Job Application Letters in response to advertisements
- Self-application letters for Jobs
- Covering Letters

4.0 MEETING – AGENDA AND MINUTES (02 lecture hours, 05 marks)

- Introduction
- Technique
- Key Language

5.0 MEMOS (03 Lecture hours, 07 marks)

5.1 Introduction
5.2 Essential features
5.3 Format and Body

6.0 E-MAILS (03 lecture hours, 07 marks)

6.1 Introduction
6.2 Method
6.3 Use of attachments
6.4 Netiquettes related to e-mails.
(Difference between memos, business letters and E-mails to be explained to students)

1.0 TECHNICALREPORTWRITING (04 lecture hours, 13 marks)

1. Introduction
2. Techniques of writing a report
3. Structure of technical reports
4. Language of technical reports
5. Types of Reports

- Accident Reports (related to industry)
- Laboratory Experiment Reports
- Workshop Reports
- Report of a Job done requiring technical expertise
- Investigative Report

8.0 JOB INTERVIEWS (04 lecture hours, 10 marks)

- Importance
- Prepare for an interview.
- Anticipating possible questions and framing appropriate answers to them
- Responding politely and appropriately
- Non-verbal communication –body language, postures, gestures, facial expressions, use of space, modulations, pitch, intonation.

9.0 GROUP DISCUSSION: (04 lecture hours, 10 marks)

1. Importance and rationale
2. Required non-verbal behavior.
3. Appropriate use of language in group interaction

- Entry / Taking the lead.
- Asking for opinion / Creating turns for others to speak
- Expressing opinion(agreeing)
- Expressing opinion(disagreeing)
- Making suggestions
- Politely interrupting
- Stopping or blocking interruptions

(Note: Chapters 8 and 9 are to be dealt in the practical classes)

SUGGESTED LEARNING RESOURCES: REFERENCES BOOKS:

1. English for Specific Purposes: A learning – Centered approach
— Hutchinson, Tom and Waters, A lan, CUP1987
2. The Second Language Curriculum
— Ed. Robert Keith Johnson, CUP1989
3. Designing Tasks for the Communicative Classroom
— David Nunan, CUP1989
4. Writing English Language Tests
— J. B. Heaton Longman Group, U K Limited1988
5. Testing for Language Teachers
— Arthur Hughes, CUP1989
6. Writing Matters
-- Kristine Brown & Susan Hood, CUP 1989
7. Communicate 2
— Keith Morrow and Keith Johnson, CUP1980
8. In at the deep end
— Vicki & Hollett, OUP1989
9. Teaching the Spoken Language,
— G. Brown and G. Yule CUP1983
10. Teaching Reading Skills in a Foreign Language
— Christine Nuttall, Heinemann1982
11. Communication in English for Technical Students
— Orient Longman1984
12. Teachers' Manual (for Communication in English for Technical Students, Orient Longman1984) Curriculum Development Centre Technical Teachers' Training Institute (Eastern Region) 1985.

PRACTICALS (under G101 and G201):

Suggested activities:

- Students may be encouraged to look up books and websites to get an idea about frequently asked questions and finding out appropriate answers to these questions.
- Mock group discussions are to be conducted for students in the presence of teachers and industry experts and these discussions are to be evaluated by peers, teachers and experts.
- Organizing and participating in Mock interviews by peers, teachers and experts from the industry
- Students are to be given an exposure to sample Job Interviews and Group Discussions from videos, CDs, DVDs, websites etc.

(ID201) BUILDING CONSTRUCTION AND MATERIALS-II KCA DISTRIBUTION

Part A total- 40 MARKS

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Wood products	-	-	02	02
2	Laminates	-	-	02	02
3	Thermal acoustic materials	-	-	02	02
4	Glass and mirrors	-	03	-	03
5	Paints. Varnishes, polishes, distemper, etc	-	02	02	04
6	Cladding	-	02	02	04
7	Water proofing materials	-	02	02	04
8	Finishing materials	-	04	01	05
9	Furnishing materials	05	02	-	07
10	Fittings	05	-	02	07

PART B Total- 35 marks

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Sliding doors and windows	-	-	02	02
2	Sliding and folding doors	-	-	02	02
3	Simple partition	-	-	02	02
4	Different types of damp proofing of interiors	-	-	02	02
5	Panelling in plywood etc	-	-	02	02
6	Staircases	05	03	02	10
7	Preparing drawings	05	03	02	10
8	Floor finishes	-	02	03	05

GRAND TOTAL PART A + PART B = 75 MARKS

NAME OF THE SUBJECT : BUILDING CONSTRUCTION &MATERIALS-II			
Course code: ID201			**Semester: Second**
Teaching Scheme			**Total Marks:125**
			PA and End Examination Scheme
Theory:	3	hrs/week	Theory PA: 25 marks
Tutorial:	1	hrs/week	Practical End Exam: 0marks
Practical:	4	hrs/week	End Semester Theory: 75 Marks Practical PA/Viva: 25 Marks
Credit:	5		

RATIONALE:

A diploma student in interior decoration and design are supposed to prepare design and detail drawing representing interior design, constructional system, and its components. In this subject skill will be given to prepare design and details of doors, window, partitions, wall paneling and claddings, staircases, and floor finishes, etc. by using various materials.

LEARNING OUTCOMES

After completing the course, the students will be able:

- To acquire knowledge about various construction materials and their application.
- To understand the planning and details of staircase for its best placement.
- To draw the details of various elements of doors and windows.
- To draw the details of various elements of floors and cavity walls and their application methods.
- To acquire knowledge to stop entry of dampness and termite in buildings.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's, smart class, and revision.

Lecture per week- 3hrs

Total Lecture per semester- 42hrs

MATERIALS-PART A

1. WOOD PRODUCTS: Comparative properties and uses of the following: veneers, Commercial plywood, Block board, particle board, teak plywood, hard board, soft board, acoustical tiles.

(01 LECTURE HOUR, 02 MARKS)

2. LAMINATES: Properties and application of all types of plastic laminates**. (01 LECTURE HOURS, 02 MARKS)**

3. THERMAL ACOUSTIC MATERIALS: Study of different types of materials used for sound proofing, Properties, and use of the following: Polyurethane products such as low density and high density, fiber glass. **(01 LECTURE HOUR, 02 MARKS)**

4. **GLASS AND MIRRORS**: Properties, sizes, design, price and availability of**:**
Sheet glass, Plate glass, Wired glass, Laminated glass, toughened glass, Safety glass, insulating glass, colored glass, tinted glass, heat resistant glass and glass blocks. **(02 lecture hours, 03 marks)**

5. **PAINTS, VARNISHES, POLISHES, DISTEMPERS, ETC**.: Wall and furniture finish like paints. Water base paints, dry distempers, plastic emulsion distempers, cement paints, varnishes, polishes lacquer, tar and bitumen, silica paints, solignum paint, black paints and their trade names, properties, covering capacity, handling technique &Uses. **(02 lecture hours, 04 marks)**

6. **CLADDING**: Wall papers, Fabric for wall lining. Flooring/Cladding materials – such as stones, granite, slate, marble, mosaic, and cement tiles & ceramic tiles, P.V.C. and metallic Claddings, Aluminum composite panel in wall cladding. **(02 lecture hours, 04 marks)**

7. **WATER PROOFING MATERIALS**: Types of water proofing compounds available and where to apply them. **(02 lecture hours, 04 marks)**

NOTE:

a. Sample for each of the above may be collected and demonstrated/exhibited to the students during the lecturers.
b. Students should be encouraged to collect these samples and maintain their own record through scrap book containing brochures samples, etc.

2. FINISHING MATERIALS: **(03 lecture hours, 05 marks)**
Different types of flooring materials
• Different types of coatings such as distemper, emulsion, paints and acrylic paints, etc.
• Claddings such as wallpaper, wood board, metals, plastic tiles, fabric, etc.
• Different types of ceiling materials such as:
• Plaster of Paris/gypsum
• Various types of tiles
• Metals (Aluminum, Steel)
• Plastics
• Fiberglass/glass
• Wood based.

9. **FURNISHING MATERIALS: (03 lecture hours, 07 marks)**
Flooring:
Different types of carpets, Rugs, Druggets
9.1.1Woolen Carpet:
(a) Hand Made Carpets
(b)(b) Hand tufted carpets.

(c) Machine made carpet (i) Cut pile (ii) Uncut pile
Quality of raw wool, quality of other raw materials used; Impact of colors; Technical specification: Knots/Tuffs per Sqr. cm. pile height, Ply of yarn, count of yarn, weight, fastness, flame resistance tests, resilience tests and acoustic quality, trade names, ISI and wool mark. Sizes and mode of measurements.

9.1.2 Installation: Installation of wall-to-wall carpets on floor fixing, carpets on wall ceiling for acoustics; joining, edge binding and fringing of carpets. Fitting and accessories; Types of underlay; How to remove a fitted wall to wall carpet; How to re-lay wall to wall carpet.

9.1.3 Care &Maintenance: Visits to manufacturing units and study wall to wall laying of carpet in process.

9.2 Curtain Materials (Draperies):
9.2.1 TYPES: Cotton curtains; Silk curtains; Cotton silk mixed; Synthetic fiber curtain; Woolen curtains; Synthetic and wool blended curtains; Flame resistant property. Wrap and weft texture, dyes blends, weight, cost, care of the above.

a. Types of curtains like plain, French pleated, etc.

b. Lining materials, Blackout curtains and Blinds

c. Fittings used - Curtain rods, rings, railing, hooks, sliding, stage curtains.

d. Venetian blinds (Horizontal and vertical), Roller blinds and space curtains.

9.3 Upholstery Covering Material (Tapestries & Other Items)

1. Introduction to various kinds of tapestries and their basic distinguishing qualities
- Cotton
- Silk
- Synthetic
- Woolen
- Rexene
- Leather
- Blended

2. To study their properties, design, dye, texture, size, weight, stitching and care.
Cushioning materials: Springs; Jute, cotton, foams, rubber. Miscellaneous Items: cane, jute, leather straps, slipcovers, fasteners, etc.

9.4. Other Furnishings:
-Bed cover, cushion covers – their designs, stitching, (Handloom, mill made, tufted candlewick, khadi and other types - both woven and printed).
-Table liner bathmats, toilet sets, etc.
-Latest items of furnishings and visits.

10. **FITTINGS: (04 lecture hours, 07 marks)**
a) Doors, windows, ventilators fittings in various metals like iron, mild steel and stainless steel, brass, aluminum, plastics, etc. Fittings like Handles,

bolts, hinges, springs, locks, latches, patch fitting for frameless glass partition and doors etc.

b) Visits to factories/show rooms for varieties, design, and prices, etc.

NOTE: Demonstration of the various furnishing and fittings materials may be arranged in the classroom to make the subject more interesting and meaningful. Students should be encouraged to collect samples and maintain a museum of material of their own. They may be advised to collect:

- Photographs of fittings and maintain an album/scrapbook.
- Preparation of drawings for the following:

CONSTRUCTION- PART B

- Sliding doors and Windows. (Wooden &Metal) **(02 lecture hours, 02 marks)**
- Sliding and folding doors. (Wooden &Metal) **(02 lecture hours, 02 marks)**
- Simple partition (in wood, glass, and metal) **(02 lecture hours, 02 marks)**
- Different types of damp proofing of interiors. **(02 lecture hours, 02 marks)**
- Paneling in plywood, ply board, wood, laminates, aluminum composite panel, claddings. **(02 lecture hours, 02 marks)**
- Staircases - Layout of staircases; types of staircases; method of calculating treads and rises, Definition of various terms. **(04 lecture hours, 10 marks)**
- Preparing drawing for a simple staircase In R.C.C./Timber/Steel. **(04 lecture hours, 10 marks)**
- Floor finishes - various types of floor finishes and their constructional details.

(**02 lecture hours, 05 marks)**

INSTRUCTIONAL STRATEGY

Class instruction is to be supplemented by studies models and visit to construction sites.
The studio periods are to be devoted to preparation of detailed construction.
drawings of all the above building elements. Students may prepare the portfolio of the work done by them throughout the session. Teacher may also organize viva-voce after each drawing assignment so as to test the level of understanding of the students about underlying concepts, principles, and procedures.

RECOMMENDED BOOKS

- Building Construction by WB Mackay; Khanna Publisher, New Delhi
- Building Construction by SP Bindra and SP Arora;; publisher Dhanpat Rai & Co. New Delhi
- Building Construction by BC Punmia; Publisher Laxmi Publication, New Delhi
- Building Construction by Sushil Kumar; Standard Publisher, New Delhi
- Construction of Buildings (Vol I and II) by Barry
- Building Construction by VB Sikka; Publisher Tata McGraw Hill Publisher, New Delhi
- Building Construction by Rangwala; Publisher Charotar Publishing House Pvt. Ltd., New Delhi

(ID202) INTERIOR DESIGN-I (RESIDENCES) KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Case Study	-	-	-	-
2	Concept Development	-	-	-	-
3	Drafting	05	20	-	25
GRAND TOTAL					25

NAME OF THE SUBJECT : INTERIOR DESIGN-I (RESIDENCES)			
Course code: ID202			**Semester: Second**
Teaching Scheme			**Total Marks:150**
			PA and End Examination Scheme
Theory:	4	hrs/week	Theory PA: 25 marks
Tutorial:	1	hrs/week	Practical End Exam: 75marks
Practical:	4	hrs/week	End Semester Theory: 25 Marks Practical PA: 25 Marks
Credit:	6		

RATIONALE: Diploma holders in interior design and decoration have to assist designers and execute interior design projects. For performing this, knowledge of principles of design, elements of design, design methodology is required, hence Teachers while imparting instructions/ giving assignments to students are expected to teach various elements of design like form function, balance, light and shadow, shape, plane, volume, line, rhythm, proportions, textures and other such related elements. Teachers are also expected to show various types of designs of small building to develop and appreciation for this subject.

Teachers should also motivate students to maintain sketch book/ portfolio of all the assignments given to the students.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:
Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's, smart class, and revision.

Lecture per week- 4hrs
Total Lecture per semester- 56hrs

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1. CASE STUDY:
Conceptualization of residential spaces & making a report of merits & demerits. Market survey & creating the problem statement. Client aspect & character.

2. CONCEPT DEVELOPMENT:
Creating concepts for design based on various themes & styles of residential interiors & making related sketches with concept sheet & area analysis.

3. DRAFTING: (4 lecture hours, 25 marks)
Making related technical drawings (plan, elevations & details) with 3d views/perspective. Material board & costing.

RECOMMENDED BOOKS

1. Time Saver Standards for Building Types by Joseph De Chiara and John Callendera
2. Time Saver Standards for Interior Design and Space planning by Joseph De Chiara, J. Panero and M.Jelnik
3. Architects Data by Neufert
4. Space, Form and Order by DKChing
5. Architectural Aesthetics by Sangeet Sharma, Abhishek Publication, Chandigarh

(ID203) HISTORY OF INTERIOR DESIGN-II KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Fundamentals of design	05	06	04	15
2	Positive and normative theory	05	06	04	15
3	Early Egyptian, Mesopotamian, and Greek period	10	06	04	20
4	Roman period and Middle Ages	10	10	05	25
GRAND TOTAL					75

NAME OF THE SUBJECT : HISTORY OF INTERIOR DESIGN-II	
Course code: ID203	**Semester: Second**
Teaching Scheme Credit: 6	**Total Marks:100** **PA and End Examination Scheme**
Theory: 4 hrs/week	Theory PA: 0 marks
Tutorial: 1 hrs/week	Practical End Exam: 0marks
Practical: 4 hrs/week	End Semester Theory: 75 Marks Practical PA: 25 Marks

RATIONALE:

To provide the student of Interior Design knowledge on various developments in Interior design through ages.

LEARNING OUTCOMES:

1. Learn the importance of historical background in the creation of new designs and themes. Understand the designs from Prehistoric Period to the Middle Ages.

2. To know more on the Modern Movements in Interior design from the beginnings of 20th century.

3. Understand the various aspects such as fundamental principles, design vocabulary & design principles related to the design of interiors.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's, smart class, and revision.

Lecture per week- 4hrs

Total Lecture per semester- 56hrs

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1. Fundamentals of Design: **(12 lecture hours, 15 marks)**

Line, plane, volume, symmetry, rhythm, harmony, etc.

2. Positive & Normative Theory: (12 lecture hours, 15 marks)

Proxemics theory, privacy theory, assets & liabilities of group design etc.

3. Early Egyptian, Mesopotamian & Greek period: (16 lecture hours, 20 marks)

Characteristic & visual impact of furniture like folding furniture, fitted furniture, wooden Greek furniture (Importance- chairs, Klismos, Couches etc.

4. **Roman Period & Middle Ages:** (16 lecture hours, 25 marks)

(Chairs, stools, couches & Others) History and social context early medieval, Romanesque, gothic furniture.

Textbooks:

1. Interior design; Ahmed,A.Kasu; 1st Ed.; 2010; Ashish Book Centre; Mumbai. ISBN8178131862
2. History of Architecture, Sir Banister Fletcher, CBS Publishers & distributors, New Delhi

Reference Books:

1. Seetharaman, Premavathy; Interior Design & Decoration; 1st Ed.; 2009; CBS; New Delhi
2. Ching D.K; Architecture: Form, space order; 1st Ed.; 2007; John Wiley; New York
3. Mary Gilliat Coyran, Interior Design Course, Octopus Ltd., London
4. Sherril Whiton, Interior Design &Decoration, Prentice Hall
5. Francis D.K. Ching, John Wiley & Sons, Interior Design, New York
6. Joseph De Chiara, McGraw Hill, Time Saver Standards for Interior Design, New York.

(ID204) GENERAL WORKSHOP PRACTICE-I KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Carpentry shop	10
2	Painting and polishing shop	10
3	Electrical shop	10
4	Welding shop	10
5	Plumbing shop	10
GRAND TOTAL (Practical End Exam)		50

NAME OF THE SUBJECT : GENERAL WORKSHOP PRACTICE-I	
Course code: ID204	**Semester: Second**
Teaching Scheme: Credit: 4	**Total Marks:100** **PA and End Examination Scheme**
Theory: 0 hrs/week	Theory PA: 50 marks
Tutorial: 0 hrs/week	Practical End Exam: 50marks
Practical: 8 hrs/week	End Semester Theory: 0 Marks Practical PA: 0 Marks

RATIONALE:

To have a balanced overall development of diploma engineers, it is necessary to integrate theory with practice. General workshop practices are included in the curriculum in order to provide hands-on experience about use of different tools and basic manufacturing practices. This subject aims at developing general manual and machining skills in the students. In addition, the development of dignity of labor, safety at workplace, team working, and development of right attitude are the other objectives.

LEARNING OUTCOMES

After completing the course, the students will be able to:

- Identify tools and equipment used and their respective functions.
- Identify different types of materials and their basic properties.
- Use and take measurements with the help of basic measuring tools/equipment.
- Select proper tools for a particular operation.
- Select materials, tools, and sequence of operations to make a job as per given specification/drawing.
- Prepare simple jobs independently and inspect the same.
- Follow safety procedures and precautionary measures.
- Use safety equipment and Personal Protection Equipment.

DETAILED CONTENTS (PRACTICAL EXERCISES)

Note: The students are supposed to come in proper workshop dress prescribed by the institute. Wearing shoes in the workshop(s) is compulsory. Importance of safety and cleanliness, safety measures and upkeep of tools, equipment, and environment in each of the following shops should be explained and practiced. The students should prepare sketches of various tools/jobs in their practical Notebook.

The following shops are included in the syllabus:

1. Carpentry Shop
2. Painting and Polishing Shop
3. Electrical Shop
4. Welding Shop
5. Plumbing Shop

1. CARPENTRYSHOP

1.1 General Shoptalk

Name and use of raw materials used in carpentry shop: wood &alternative materials.

Names, uses, care and maintenance of hand tools such as different types of Saws, C-Clamp, Chisels, Mallets, Carpenter's vices, marking gauges, Try-squares, Rulers and other commonly used tools and materials used in carpentry shop by segregating as cutting tools, supporting tools, holding tools, measuring tools etc.

Specification of tools used in carpentry shop.

Different types of Timbers, their properties, uses &defects.

Seasoning of wood.

1.2 Practice

Practices for Basic Carpentry Work

Sawing practice using different types of saws.

Assembling jack plane — Planning practice including sharpening of jack plane cutter

Chiseling practice using different types of chisels including sharpening of chisel.

Making of different types of wooden pin and fixing methods.

Marking measuring and inspection of jobs.

1.3 Job Practice

Job1 Marking, sawing, planning, and chiseling and their practice.

Job II Half Lap Joint (cross, L or T – anyone)

Job III Mortise and Tenon joint (T-Joint)

Job IV Dove tail Joint (Lap or Bridle Joint)

1.4. Demonstration of job showing use of Rip Saw, bow saw, and Tenon saw, method of sharpening various saws.

2. PAINTING AND POLISHINGSHOP

Introduction of paints, varnishes, Reason for surface preparation, Advantages of Painting, other method of surface coating i.e., Electroplating etc.

Job Practice

Job 1: To prepare a wooden surface for painting apply primer on one side and to paint the same side. To prepare French polish for wooden surface and polish the other side.

Job II: To prepare metal surface for painting, apply primer and paint the same.

Job III: To prepare a metal surface for spray painting, first spray primer and paint the same by spray painting gun and compressor system.

The sequence of polishing will be as follows:

i) Abrasive cutting by leather wheel.

ii) Polishing with hard cotton wheel and with polishing material

iii) Buffing with cotton wheel or buffwheel.

3. ELECTRICAL SHOP

Study, demonstration, and identification of common electrical materials with standard ratings and specifications such as wires, cables, switches, fuses, cleats, clamps and allied items, tools and accessories. Study of electrical safety measures and protective devices.

Job I Identification of phase, Neutral and Earth wires for connection to domestic electrical appliances and their connections to three pin plugs.

Job II Carrying out house wiring circuits using fuse, switches, sockets, ceiling rose etc. in batten or P.V.C. casing-caping.

Study of common electrical appliances such as auto electric iron, electric kettle, ceiling/table fan, desert cooler etc. Introduction to the construction of lead acid battery and its working.

Job III Installation of battery and connecting two or three batteries in series and parallel.
Introduction to battery charger and its functioning.

Job IV Charging a battery and testing with hydrometer and cell tester.

4. WELDING SHOP

Introduction and importance of welding as compared to other material joining processes. Specifications and type of welding machines, classification and coding of electrodes, welding parameters, welding joints and welding positions. Materials to be welded, safety precautions.

Job Practice

Job I Practice of striking garc(Minimum4beadson100mmlong M.S. flat).

Job II Practice of depositing beads on plate at different current levels. (Minimum 4 beads on M.S. plate at four setting of current level).

Job III Preparation of lap joint using arc welding process.

Job IV Preparation of T-joint using gas welding or arc welding on 100 mm x 6 mm MS Flat

5. PLUMBING SHOP

Use of personal protective equipment's, safety precautions while working and cleaning of shop.
Introduction and demonstration of tools, equipment and machines used in plumbing shop.
Introduction of various pipes and pipe fittings of elbow, nipple, socket, union etc.

Job Practice

Job 1: Preparation of job using elbow, bend, and nipple.

Job II: Preparation of job using Union, Tap, Plug and Socket.

Job III: Threading practice on pipe with die

MEANS OF ASSESSMENT

- Workshop jobs
- Report writing, presentation and viva-voce.

RECOMMENDED BOOKS

1. Workshop Technology I, II, III, by SK Hajra, Choudhary and AK Choudhary; Media Promoters and Publishers Pvt. Ltd. Mumbai.
2. Workshop Technology Vol. I, II, III by Manchanda; India Publishing House, Jalandhar.
3. Workshop Training Manual Vol. I, II by S.S. Ubhi; Katson Publishers, Ludhiana.
4. Manual on Workshop Practice by K Venkata Reddy; MacMillan India Ltd., New Delhi
5. Basic Workshop Practice Manual by T Jeyapoovan; Vikas Publishing House (P) Ltd., New Delhi
6. Workshop Technology by B.S. Raghuwanshi; Dhanpat Rai and Co., New Delhi
7. Workshop Technology by HS Bawa; Tata McGraw Hill Publishers, New Delhi.

(ID205) INTERIOR SERVICES-I (ELECTRICAL & PLUMBING) KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Water supply and drainage	15	06	07	28
2	Lighting and other electrical plans	15	08	06	29
3	Communication	06	05	07	18
GRAND TOTAL					75

NAME OF THE SUBJECT : INTERIOR SERVICES-I (ELECTRICAL AND PLUMBING)	
Course code: ID205	**Semester: Second**
Teaching Scheme: Credit: 4	**Total Marks:100**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 0marks
Practical: 2 hrs/week	End Semester Theory: 75 Marks Practical PA: 0 Marks

RATIONALE:

The student should have adequate knowledge of various services used in interior design projects, their types, characteristics, application, installation method and means, so that the student must be able to judiciously select services, which are the most appropriate to a given situation/ specific project.

LEARNING OUTCOMES

After completing the course, the students will be able to:

- Understand the importance of various services in a building.
- Study and draw the details of water supply and drainage system and their materials.
- Apply the details and knowledge of insulating a built environment thermally and acoustically.
- Understand and to draw the electrical requirement and details of a building.
- Be able to select proper electrical/ sanitary fixtures required for best services/effects.
- Study about various mechanical means of air-conditioning and ventilation.
- Identify the need of best communication system for a building.
- Study and application of firefighting norms and equipment's.
- Identify the need and application of advanced security system for a building.

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 14 weeks and rest 2 weeks would be utilized for practical's and revision.

Lecture per week- 3hrs

Total Lecture per semester- 42hrs

UNIT TOPIC / SUB-TOPIC	Lecture Hrs.	Marks
1. WATER SUPPLY AND DRAINAGE: Water Supply: Hot and cold-water supply system Geyser and boilers, types and sizes of pipes, water supply fittings to bathrooms, Sanitary fixtures like water closet; European and Indian WCs, sink, bathtubs, washbasins, bidets, showers, urinals, etc. Toilet Accessories like. soap tray, towel rods, shower curtains. Jacuzzi, Bath enclosure, multi-functional	**08**	**28**

shower panels, sauna, sensor-based fittings.

- Drainage: Principles of drainage; Materials for drains - Traps - their types, function and uses. Earthen pipes, Cement pipe, P.V.C. pipes and C.I. pipes. Sanitary fixture - Wcs, washbasins, bathtub, sinks - their types, sizes. Septic tank - types, sizes, etc.

2. LIGHTING AND OTHER ELECTRICAL PLANS: **8** **29**

a) Different system of lighting - (Incandescent, Fluorescent) Kinds and media. Planning lighting for different work areas, Matching light with site such as drawing room, bedroom, study, bath, kitchen, etc. and public places like offices, theatres, exhibition, display and such other areas including basic knowledge of materials, finishes and maintenance.

b) Preparation of electrical layout for residences by symbolic representation as per IS: 962/1967 including selection of matching fittings. Study of different wiring systems.

c) Conduit - types and uses.

3. COMMUNICATION: **4** **18**

Telephone, Internet, PBX, Optical fiber cables network, Wi-Fi networking and other communication devices.

RECOMMENDED BOOKS

1. Water supply and Sanitary Installations by Anand Chintaman panchdhari; Published by New Age International Pvt. Ltd.
2. Handbook of Designing and installation services in high-rise building complexes by Er. B.K Jain; Khanna publishers.
3. Plumbing and Sanitation (Hindi Edition) by S.K. Jain and Amit Aggarwal, Bhratiye Technical Publications.
4. Modern Basic Electrical and House wiring servicing by M. Lotia; Bpb publications.
5. Lighting for Interior Design by Malcolm inner published by Laurence king publishing.

(ID206) PROFESSIONAL PRACTICES-I KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Lectures	15
2	Group discussion	20
3	Student activities	15
GRAND TOTAL		50

NAME OF THE SUBJECT : PROFESSIONAL PRACTICES-I	
Course code: ID206	**Semester: Second**
Teaching Scheme: Credit: 1	**Total Marks:50** **PA and End Examination Scheme**
Theory: 0 hrs/week	Theory PA: 0 marks
Tutorial: 1 hrs/week	Practical End Exam: 0marks
Practical: 2 hrs/week	End Semester Theory: 0 Marks Practical PA: 50 Marks

RATIONALE:

This subject will deliver knowledge education beyond acquiring the degree but for the purpose of practice with the following objectives:

- Search information from different sources for preparing notes on given topic.
- Present given topic in a seminar. Interact with peers to share thoughts.
- Prepare are port on industrial visit, expert lecture.

Suggested List of activities to be done **Lecture Hrs.**

1. **Lectures** by Professional/ Industrial Expert/Student Seminars based on Information search to be organized Three nos.) **06**

2. **Group Discussion:** **10**

The students should discuss in a group of six to eight students and write a brief report on the same as apart of term work. Two topics for group discussions may be selected by the faculty members. Some of the suggested topics are–

a. Famous architects of the world.
b. Indian architecture.
c. Qualities for a good architect
d. Future of building construction

3. **Student Activities:** **08**

The students in a group of 3to4 will perform one activity (Faculty members of the concerned discipline may provide a list of activities)

(G301)- DEVELOPMENT OF LIFE SKILLS-I (PROGRESSIVE ASSIGNMENT) DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Importance of DLS	03
2	Information search	07
3	Written communication	03
4	Self-analysis	07
5	Self-development	20
6	Study habits	10
GRAND TOTAL		50

NAME OF THE SUBJECT :	DEVELOPMENT OF LIFE SKILLS-I
Course code: G301	**Semester: First**
Teaching Scheme: 15 working hours	**Total Marks:50**
	PA and End Examination Scheme
Theory: 1hrs/week	Theory PA: 0 marks
Tutorial: 0hrs/week	Practical End Exam: 0marks
Practical: 2hrs/week	End Semester Theory: 0 Marks Practical PA: 50 Marks
Credit: 2	

RATIONALE:

- Conduct different session to improve students' memory Power.
- Conduct different session to improve time management skills.
- Motivate student of ace realistic problem with confidence and positive approach

Objectives: -

- Develop reading skills.
- Use techniques of acquisition of information from various sources
- Draw the notes from the text for better learning.
- Apply the techniques of enhancing the memory power.
- Develop assertive skills.
- Prepare report on industrial visit.
- Apply techniques of effective time management.
- Set the goal for personal development.
- Enhance creativity skills.
- Develop good habits to overcome stress.
- Face problems with confidence

DETAILED COURSE CONTENT THEORY:

Teaching Scheme:

Each Session/semester will be for 16 weeks out of which effective teaching would be for 15 weeks and rest 1 week would be utilized for practical's, smart classes and revision.

Lecture per week- 1hrs

Total Lecture per semester-15hrs

1.0 IMPORTANCE OF DLS: (01 lecture hours, 03 marks)

Introduction to subject, importance in present context, application

2.0 INFORMATION SEARCH: (02 lecture hours, 07 marks)

Information source –Primary, secondary, tertiary Print and non –print, documentary, Electronic Information center, Library, exhibition, Government Departments. Internet Information search–Process of searching, collection of data–questionnaire, taking Interview, observation method.

3.0 WRITTEN COMMUNICATION: (01 lecture hours, 03 marks)

Method of note taking, Report writing–Concept, types, and format.

4.0 SELF ANALYSIS: (02 lecture hours, 07 marks)

Understanding self-attitude, aptitude, assertiveness, self-esteem, Confidence buildings. Concept of motivation

5.0 SELF DEVELOPMENT: (06 lecture hours, 20 marks)

Stress Management–Concept, causes, effects and remedies to Avoid/minimize stress. Health Management–Importance, dietary guidelines and exercises. Time management- Importance, Process of time planning, Urgent Importance, Factors leading to time loss and ways to handle it, Tips for effective time management.

6.0 STUDY HABITS: (03 lecture hours, 10 marks)

Ways to enhance memory and concentration. Developing reading skill. Organization of knowledge, Model and methods of learning.

SUGGESTED LEARNING RESOURCES

Reference Books:

1. Personality Development &Soft Skills-B. K. Mitra, Oxford University Press
2. Basic Managerial Skills for All-E.H.McGrath,S.J.,Prentice Hall of India Pvt Ltd
3. Body Language- Allen Pease, Sudha Publications Pvt. Ltd.
4. Creativity and problem solving-Lowe and Phil, Kogan Page(I)P Ltd
5. Decision making & Problem Solving-Adair, J, Orient Longman
6. Develop Your Assertiveness-Bishop, Sue, Kogan Page India
7. Time management-Chakravarty, Ajanta,RupaandCompany
8. Life Skills Activities for Secondary Students with Special Needs- Darlene Mannix, Kindle Edition

Internet Assistance:

1) http://www.mindtools.com
2) http://www.stress.org
3) http://www.ethics.com
4) http://www.coopcomm.org/workbook.htm
5) http://www.mapfornonprofits.org/
6) http://www.learningmeditition.comhttp://bbc.co.uk/learning/courses/
7) http://eqi.org/
8) http://www.abacon.com/commstudies/interpersonal/indisclosure.html
9) http://www.mapnp.org/library/ethics/ethxgde.m10)http://www.mapnp.org/library/grp_cnfl/grp_cnfl.htm11)http://members.aol.com/nonverbal2/diction1.htm12)http://www.thomasarmstron.com/multiple_intelligences.htm13)http://snow.utoronto.ca/Learn2/modules.html14)http://www.quickmba.com/strategy/swot/

Practical:
Suggested List of activities:

- 1 Conduct Guest Lectures.
- Conduct Industrial visits.
- Conduct Seminar/Group Discussions.

Suggested List of Assignments/Tutorial:
The Term Work Will Consist of Following Assignments.

1 . Library search: -
Visit your Institute's Library and enlist the books available on the topic given by your teacher. Prepare a bibliography consisting name of the author, title of the book, publication, and place of publication.

2 Enlist the magazines, periodicals and journals available in your library. Select anyone of them and write down its content. **Choose a topic for presentation.**

3 Attend a seminar or a guest lecture, listen to it carefully and note down the important point and prepare are port of the same.

4 Visit to anyone place like historical/office/farms/development sites etc. And gather information through observation, print resources and interviewing the people.

5 Prepare your individual timetable for a week–
(a) List down your daily activities.
(b) Decide priorities to be given according to the urgency and importance of the activities.
(c) Find out your time wasters and mention the corrective measures.

6 Keep a diary for your individual indicating- planning of time, daily transactions, collection of good thoughts, important data, etc.

7 Find out the causes of your stress that leads to tension or frustration. Provide the ways to Avoid them or to reduce them.

8 Undergo the demonstration on yoga and meditation and practice it. Write your own views, feeling and experiences on it.

NOTE: -THESE ARE THE **SUGGESTED ASSIGNMENT** FOR GUIDELINES TO THE SUBJECT TEACHER. HOWEVER, THE SUBJECT TEACHERS CAN SELECT, DESIGN ANY ASSIGNMENT RELEVANT TO THE TOPIC, KEEPING IN MIND THE OBJECTIVES OF THIS SUBJECT.

SEMESTER III

(ID301) INTERIOR SERVICES-II(HVAC & FIRE FIGHTING) KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Air Conditioning and Ventilation	15	10	08	33
2	Fire Fighting	12	8	5	25
3	Advance Building System	10	5	02	17
GRAND TOTAL					75

NAME OF THE SUBJECT : INTERIOR SERVICES- II (HVAC & FIRE FIGHTING)	
Course code: ID301	**Semester: Third**
Teaching Scheme: Credit: 4	**Total Marks:100**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 0 marks
Practical: 2 hrs/week	End Semester Theory: 75 Marks Practical PA: 0 Marks

Course Objectives:

To develop concepts of design, installation, operation and monitoring of the electrical services, lifts and escalators in residential and commercial buildings.

Learning Outcomes:

The students will learn to:

1.To understand the need and applications of electrification and mechanical services in buildings with exposure to various systems, methods, and fixtures.

2.The importance, significance, and applications of different methods of illumination and electrical wiring and fittings as an important part of construction and architecture.

3.The need of mass/bulk movement (horizontal, inclined, vertical) of persons and materials.

Detailed Syllabus:

1. FIRE FIGHTING: Fire detection, Fire alarm, fire Fighting.	**14**	**25**
2. AIRCONDITIONING AND VENTILATION: Introduction to different kinds of air conditioning system and their merit and demerits for air conditioning (Window, split; Wall mount and floor standing, Cassette AC and Central air conditioning system).	**18**	**33**
3. Advance Building system (Home automation system) a) Security surveillance & Access Control systems: Introduction, Use, Scope, Need CCTV: equipment and network requirement CCTV System and its application IP/ Network security system b) Access Control Access control systems Access control Applications Connecting domestic and office equipment's/ devices with wireless automation	**10**	**17**

Textbooks:

1. Philips, Derek; *Lighting in Architectural Design;* 1st Ed.; 1964; McGraw Hill; New York.
2. Hopkenson, R.G. & Kay, J.D.; *The lighting of Buildings;* 1st Ed.; 1969; Faber & Faber; London.
3. Ambrose, E.P.; *Electric Heating;* 1st Ed, 1968; John Wiley& Sons; New York.

Reference Books:

1. *National Building Code.*
2. *Electrical systems.*
3. Handbook of building Engineers in metric systems; 1968; New Delhi
4. *National Building Code*

(ID302) PRODUCT DESIGN-I KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE/DRAWINGS)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	TOPIC 1	30	-	-	30
2	TOPIC 2	20	-	-	20
GRAND TOTAL					50

NAME OF THE SUBJECT : PRODUCT DESIGN-I	
Course code: ID302	**Semester: Third**
Teaching Scheme: Credit: 4	**Total Marks:100**
	PA and End Examination Scheme
Theory: 2 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 0marks
Practical: 4 hrs/week	End Semester Theory: 50 Marks Practical PA: 25 Marks

RATIONALE:

To make the students learn the production technique of furniture and accessories related to interiors in any medium.

DETAILED CONTENT THEORY:

Topic 1- (15 Lecture hours, 30 Marks)

1. Selection of an area in furniture/ceramics/Pottery/ Stone/Metals/ light fittings, fixtures, or other accessories in relation to interiors and develop a design scheme based on design process. The medium could be selected out of wood, fiber glass, metal, cane, Thermacol, Plaster of Paris, etc. Ceramic painting, small pieces of Sculpture using Mud/Ceramic/Plaster of Paris.

- Preparation of working drawings of finally selected product design keeping in mind the anthropometry, Preparing a design on paper of one furniture items with details of materials and budget

- Product design using waste and recycle materials, using wood stems, small plant, Dry roots etc., Planters stand, Flower arrangement scheme using different products.

Topic 2-(13 Lecture hours, 20 Marks)

2. Preparation of product design using computer software and preparing a small-scale model with appropriate Material.

RECOMMENDED BOOKS

1. The Design of Every day thinks by Don Norman; Published by Basic Books U.K.
2 "Styled" by Emily Henderson Published by Potter Style U.S.

(ID303) INTERIOR DESIGN-II (RESTAURANTS) KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Case Study	-	-	-	30
2	Concept Development	-	-	-	20
3	Drafting	05	20	-	25
GRAND TOTAL					25

NAME OF THE SUBJECT : INTERIOR DESIGN- II (RESTAURANTS)	
Course code: ID303	**Semester: Third**
Teaching Scheme: Credit: 4	**Total Marks:150**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 75 marks
Practical: 2 hrs/week	End Semester Theory: 25 Marks Practical PA: 25 Marks

RATIONALE:

The basic elements and concepts of interior designs have been dealt with in length in previous years. Now the application of these principles and elements of designing and planning, to certain category of building such as rooms, shops, offices, etc. are to be dealt with in this paper.

1. **CASE STUDY**

Case Study: Conceptualization of different types of similar spaces & making a report of merits & demerits. Market survey & creating the problem statement.

2. **CONCEPT DEVELOPMENT**

Creating concepts for design & making related sketches with concept sheet & area analysis keeping in view the requirements of the anthropometric & ergonomic standards.

3. **DRAFTING (4 Lecture hours, 25 Marks)**

Making related technical drawings (plan, elevations & details) with 3d views/perspective. Material board & costing.

NOTE:

- Seminar on latest furnishing materials.
- At least one plan and elevation should be prepared by using a software.

RECOMMENDED BOOKS

1. Interior Design by Ahmed A.Kasu; Published by Ashish Book Center .
2. Architects Data by Neufert
3. Space, Form and Order by DK Ching
4. Interior Design (principles & Practice) by M. Pratap Rao ; Standard publishers & Distributors Pvt. Ltd.
5. The Interior Design (Reference + Specification Book) by Chris Grimely and Mimi Love; published by rock port publishers.

(ID304) COMPUTER APPLICATION-I (CAD) KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Introduction to AutoCAD	-
2	Creating and saving a new Drawing	06
3	Drawing Commands	08
4	Viewing an Existing Drawing	03
5	Modifying an Existing Drawing	12
6	Making and Inserting Blocks	10
7	Dimensioning and Text	04
8	Plotting Drawings	07
TOTAL		50

NAME OF THE SUBJECT : COMPUTER APPLICATION-I (CAD)	
Course code: ID304	**Semester: Third**
Teaching Scheme: Credit: 4	**Total Marks:100**
	PA and End Examination Scheme
Theory: 2 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 50 marks
Practical: 4 hrs/week	End Semester Theory: 0 Marks Practical PA: 25 Marks

RATIONALE: In the present times an architectural assistant should be capable of drafting drawings on the computer. Due to increasing need for computerized drawings by most architects for their ease of drafting, editing, managing and presentation at the end of the course the students should be able to make 2-D architectural drawings for presentation and construction purposes. The student should get familiar with the latest AutoCAD versions.

DETAILED CONTENTS

Note: Relevant theory may be taught along with practical exercises in each topic.

1. **Introduction to AutoCAD**
   a. Input devices
   b. Graphics
   c. Starting AutoCAD
   d. Inside the drawing editor
   e. Commands in the menus (Tool bars)
   f. Accessing Commands
   g. Entity selection
   h. Entering coordinates
   i. Folders for organizing drawings and files exercise: creating folders and sub-folders.

2. **Creating and saving a new Drawing**
   a. Commands and options to create new drawings.
   b. Units
   c. Limits
   d. Snap
   e. Grid
   f. Ortho
   g. Layer
   h. Application of layers
   i. Open a new, existing drawing.
   j. Save, save as, quit, close, exit.
   k. Customization of tool bars

Exercise: Setting up a new drawing with units, limits etc.

3. Drawing Commands

a. Line
b. Poly line/Double line.
c. Arc
d. Ellipse
e. Polygon
f. Rectangle
g. SP line
h. Circle
i. Sketch.
j. Hatch
k. Donuts

Exercise: Making a composition of different geometrical shapes using various drawing commands

4. Viewing an Existing Drawing

a. Zoom
b. Pan
c. Redraw and Regen all Regen Auto
d. View

Exercise: Viewing, zooming of existing drawing made in section 3.

5. Modifying an Existing Drawing

a. Undo Redo/Oops
b. Trim
c. Move
d. Offset
e. Rotate
f. Array
g. Stretch
h. Divide
i. Champher
j. Erase
k. Break
l. Copy, multiple copy
m. Mirror (Mirror test)
n. Change (change properties)
o. Extend

p. Explode
q. Blip mode
r. Scale
s. Fillet

Exercise: a) Modifying composition made in section 3
b) Making plan, elevation, and section of simple building

6. **Making and Inserting Blocks**

a. Blocks
b. Insert block.
c. Base
d. Using library for blocks
e. W-block
f. X-ref
g. Explode

Exercise: Inserting furniture, fixtures, trees etc. in the plans, sections and elevations made in section 5.

7. **Dimensioning and Text**

- Dimension type, style, unit
- Dimension utilities
- Dimension variables
- Dimensioning of different elements like (Horizontal, vertical, inclined). Arc. Circle Radius, diameter, continuous dimensioning etc.
- Editing dimension text and updating (adding new text and editing existing text)
- Text style - font types, height, width factor etc. as per plotting paper size.

Exercise: Dimensioning and editing text in composition made in Sections 5 and 6.

8. **Plotting Drawings**

- Plot command
- Selecting area for plotting.
- Scale of plot, scale to fit.
- Selecting plotting device
- Selecting paper size and type
- Selecting black and white or colored plots
- Selecting appropriate print speed, quality, Print preview.
- Working in Paper space and plotting

INSTRUCTIONAL STRATEGY

This is a highly practical oriented subject. Efforts should be made by the teachers to procure relevant software and give practical exercises to individual students, so that they develop proficiency in operating computer software as applied to the profession of architecture. The theoretical instructions should be dovetailed with practical work.

Towards the end of the session each student should be given independent computer-based project assignment. Experts from practicing architectural field may be invited to deliver talks and for presentation of live case studies on computers to motivate the students and increase their level of awareness. Special efforts should be made by the teachers to develop well defined small tutorial exercises on each topic and supervise the exercises being performed by the student throughout the session. If need be some basic operational fundamental exercises may be repeated in the beginning of the session. Special emphasis may be laid on training the students through availing help from the user-friendly architectural software, so that they develop confidence and are able to work independently

(ID305) BUILDING CONSTRUCTION AND MATERIALS-III KCA DISTRIBUTION

Sl.no	TOPIC Preparing drawings for:	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Doors & Windows	05	10	-	15
2	Partitions	-	06	04	10
3	Soundproof cabin design	-	03	03	06
4	Different methods of support and finishes of false ceilings	06	06	02	14
5	Moveable furniture	-	04	02	06
6	Built in furniture and fixtures	-	04	02	06
7	Modular furniture and kitchen	05	05	02	12
8	Introduction of contemporary building materials	-	02	04	06
GRAND TOTAL					**75**

NAME OF THE SUBJECT : BUILDING CONSTRUCTION AND MATERIALS-III	
Course code: ID305	**Semester: Third**
Teaching Scheme: Credit: 4	**Total Marks: 150**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 50 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 2 hrs/week	End Semester Theory: 75 Marks Practical PA: 25 Marks

RATIONALE:

A diploma student of interior design is supposed to prepare design and detailed drawing representing interior design, constructional systems, and components. Through this paper they will learn to prepare design and details of door, windows, internal partitions, false ceiling, movable furniture, built in furniture, etc. by using various materials.

LEARNING OUTCOMES

After completing the course, the students will be able:

- To acquire knowledge about various construction materials and their application.
- To understand the planning and details of sound proof cabin and their acoustical treatment on walls ,floor, doors and Windows.
- To draw the details of various types and elements of doors.
- To draw the details of various elements of false ceiling and their application methods.
- To acquire knowledge of modern building materials, modular furniture, modular kitchen and other prefabricated materials.

DETAILED CONTENTS

PREPARING DRAWING FOR

1. Doors & Windows: (10 Lecture hours, 15 Marks)

(a) Aluminum and steel doors and windows with grills.
(b) Swing doors/ Pivot doors.
(c) Revolving doors.
(d) Shop window front.

-Brief description of uPVC Doors and Windows.

2. **Movable Partition**; **(07 Lecture hours, 10 Marks)**
Sliding and folding partitions, collapsible shutters, and Rolling Shutter.

3. **Soundproof design**. **(03 Lecture hours, 06 Marks)**

4. Different methods of support and finishes of false ceilings. (07 Lecture hours,14 Marks)

5. **Movable Furniture. (03 Lecture hours, 06Marks)**

6. **Built in furniture and fixtures. (04 Lecture hours, 06 Marks)**

7. **Modular furniture and modular kitchen**; **(06 Lecture hours,12 Marks)**

   Types of steel baskets –Grain Trolley, cutlery tray, cup and Saucer baskets, Carousels etc.
   - Hardware like Spring hinges, soft close hinges, telescopic channels etc. used in kitchen and other modular furniture.
   - Prefabricated interior materials and techniques.

8. **Introduction of contemporary building materials** as per current demand and availability in the Market. **(02 Lecture hours, 06 Marks)**

STUDY REPORT AS AN ASSIGNMENT

Students are supposed to pick anyone "Live project site" where they have to make; as- made drawings and complete report on; Stone/ tile Flooring work, False ceiling work, sanitary fixture installations, Electrical layout and fixture installations, woodwork, painting and polishing work, quantity analysis, Specification Chart and Estimate.

NOTE:

Emphasis should be on studio work for original design and its detailing. The lecture and studio are interrelated, and the teacher should explain the basic concepts before starting the drawing work.

RECOMMENDED BOOKS: -

1- Modular kitchen planning and designing guide by Gopal Dwivedi; published by Notion Press.
2- Door and Window Design by Antonio Corcuera ; Published by TeNeues Media GmbH & KG, USA

(ID306) GENERAL WORKSHOP PRACTICE-II MARKS DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Fitting Shop	13
2	Sheet Metal Shop	13
3	Mason Shop	14
4	Machine Shop	10
GRAND TOTAL FOR THEORY PA		**50**

NAME OF THE SUBJECT : GENERAL WORKSHOP PRACTICE-II	
Course code: ID306	**Semester: Third**
Teaching Scheme Credit: 4	**Total Marks: 100**
	PA and End Examination Scheme
Theory: 0 hrs/week	Theory PA: 50 marks
Tutorial: 0 hrs/week	Practical End Exam: 50 marks
Practical: 8 hrs/week	End Semester Theory:0 Marks Practical PA: 0 Marks

RATIONALE:

In order to have a balanced overall development of diploma engineers, it is necessary to integrate theory with practice. General workshop practices are included in the curriculum in order to provide hands-on experience about use of different tools and basic manufacturing practices. This subject aims at developing general manual and machining skills in the students. In addition, the development of dignity of labor, safety at work place, team working and development of right attitude are the other objectives.

LEARNING OUTCOMES

After completing the course, the students will be able to:

- Identify tools and equipment used and their respective functions.
- Identify different types of materials and their basic properties.
- Use and take measurements with the help of basic measuring tools/equipment.
- Select proper tools for a particular operation.
- Select materials, tools, and sequence of operations to make a job as per given specification/drawing.
- Prepare simple jobs independently and inspect the same.
- Follow safety procedures and precautionary measures.
- Use safety equipment and Personal Protection Equipment.

DETAILED CONTENTS (PRACTICAL EXERCISES)

Note: The students are supposed to come in proper workshop dress prescribed by the institute. Wearing shoes in the workshop(s) is compulsory. Importance of safety and cleanliness, safety measures and upkeep of tools, equipment and environment in each of the following shops should be explained and practiced. The students should prepare sketches of various tools/jobs in their practical Notebook.

The following shops are included in the syllabus:

1. Fitting Shop
2. Sheet Metal Shop
3. Mason Shop
4. Machine Shop

1. FITTING SHOP (13 Marks)

- Use of personal protective equipment and safety precautions while working.
- Basic deburring processes.
- Introduction to fitting shop tools, marking and measuring devices/equipment.
- Identification of materials. (Iron, Copper, Stainless Steel, Aluminum etc.)
- Identification of various steel sections (flat, angle, channel, bar etc.).
- Introduction to various fitting shop operations/processes (Hacksawing, Drilling, Chipping and Filing).

Job Practice

Job I -Marking of job, use of marking tools, filing and use of measuring instruments. (Vernier caliper, Micrometer and Vernier height gauge).
Job II -Filing a rectangular/square piece to maintain dimensions within an accuracy of ±.25 mm.
Job III -Making a cut-out from a square piece of MS flat using hand hacksaw and chipping.
Job IV -Drilling and tapping practice on MS Flat.

2. SHEET METAL SHOP (13 Marks)

- Introduction to sheet metal shop, use of hand tools and accessories e.g., different types of hammers, hard and soft mallet, sheet and wire gauge, necessary allowance required during job fabrication, selection of material.
- Introduction and demonstration of hand tools used in sheet metal shop.
- Introduction and demonstration of various machines and equipment used in sheet metal shop e.g., Shearing Machine, Bar Folder, Burring Machine,
- Introduction and demonstration of various raw materials used in sheet metal shop e.g., black-plain sheet, galvanized-iron plain sheet, galvanized corrugated sheet, aluminum sheet etc.
- Study of various types of nuts, bolts, rivets, screws etc.

Job Practice

Job I: Shearing practice on a sheet using hand shears.
Job II: Practice on making Single riveted lap joint/Double riveted lap Joint.
Job III: Practice on making Single cover plate chain type, zig-zag type and single rivetted Butt Joint.

3. MASON SHOP (14 Marks)

- Introduction and importance of Mason shop
- Introduction of tools, equipment and machines used in Mason shop.

Job Practice

Job I: Preparation of simple bond
Job II: Preparation of Arched bond
Job III: Preparation of RCC structure (column and beam)

4. MACHINE SHOP (10 Marks)

- Study and sketch of lathe machine
- Study and Sketch of grinders, milling machine, drilling machine and CNC machine.
- Plain and step turning and knurling practice.
- Study and sketch of planning/shaping machine and to plane a rectangle of cast iron.

MEANS OF ASSESSMENT

- Workshop jobs
- Report writing, presentation and viva voce.

RECOMMENDED BOOKS

1. Workshop Technology I, II,III, by SK Hajra, Choudhary and AK Choudhary; Media Promoters and Publishers Pvt. Ltd. Mumbai.
2. Workshop Technology Vol. I, II, III by Manchanda; India Publishing House, Jalandhar.
3. Workshop Training Manual Vol. I, II by S.S. Ubhi; Katson Publishers, Ludhiana.
4. Manual on Workshop Practice by K Venkata Reddy; MacMillan India Ltd., New Delhi
5. Basic Workshop Practice Manual by T Jeyapoovan; Vikas Publishing House (P) Ltd., New Delhi
6. Workshop Technology by B.S. Raghuwanshi; Dhanpat Rai and Co., New Delhi

Workshop Technology by HS Bawa; Tata McGraw Hill Publishers, New Delhi.

(ID307) PROFESSIONAL PRACTICES-II KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Lectures	15
2	Group discussion	20
3	Student activities	15
GRAND TOTAL		**50**

NAME OF THE SUBJECT : PROFESSIONAL PRACTICE-II	
Course code: ID307	**Semester: Third**
Teaching Scheme Credit: 1	**Total Marks: 50** **PA and End Examination Scheme**
Theory: 0 hrs/week	Theory PA: 0 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 2 hrs/week	End Semester Theory:0 Marks Practical PA: 50 Marks

RATIONALE:

This subject will deliver knowledge education beyond acquiring the degree but for the purposeof practice with the following objectives:

- Search information from different sources for preparing notes on given topic.
- Present given topic in a seminar. Interact with peers to share thoughts.
- Prepare a report on industrial visit, expert lecture.

Suggested List of activities to be done:

1. **(09 Lecture hours, 15 marks)**
   Lectures by Professional / Industrial Expert / Student Seminars based on information search to be organized Three nos.)

2. **Group Discussion: (09 Lecture hours, 20 marks)**
   The students should discuss in a group of six to eight students and write a brief report on the same as a part of term work. Two topics for group discussions may be selected by the facultymembers. Some of the suggested topics are -
   a) Naga Architecture
   b) Urbanization
   c) Climate change and Building Technology

3. **Student Activities**: **(10 lecture hours, 15 marks)**
   The students in a group of 3 to 4 will perform one activity (Faculty members of the concerned discipline may provide a list of activities)

NAME OF THE SUBJECT: DEVELOPMENT OF LIFE SKILL- II	
SUBJECT CODE: G302	**Semester: Third**
Teaching Scheme Lecture: 1hr/week	**Maximum Marks: 50** **PA and End Examination Scheme**
Tutorial: 0 hrs/week	Theory PA: 0marks Practical End: 0 marks
Practical : 2 hrs/week Credit : 2	End Semester Theory Exam: 0 marks Practical PA Exam: 50 Marks

Rationale:

The nature of organizations is changing at very rapid speed in this competitive world. In this situation the responsibility of diploma holder is not unique. He will be a part of a team in the organization. As such the individual skills are not sufficient to work at his best.

This subject will develop the student as an effective member of the team. It will develop the abilities and skills to perform at highest degree of quality as an individual as well as a member of core group or team.

Such skills will enhance his capabilities in the field of searching, assimilating information, managing the given task, handling people effectively, solving challenging problems.

The subject is classified under Human Science.

Module/Unit After completion of the course, students will be able to:

Apply task management techniques for given projects

Enhance leadership traits

Resolve conflict by appropriate method

Apply problem solving skills for a given situation

Apply techniques of effective time management

Face the interview without fear

Convince people to avoid frustration

Follow moral and ethics

SEMESTER IV

(ID401) COSTING AND ESTIMATION-I KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Specification	05	03	02	10
2	Estimation	05	03	02	10
3	Tendering	-	04	04	10
4	Preparation of measurement book for BOQ	-	04	02	10
5	Units for measurement and prepare BOQ	-	04	02	10
GRAND TOTAL					**50**

NAME OF THE SUBJECT : COSTING AND ESTIMATION-I	
Course code: ID401	**Semester: Fourth**
Teaching Scheme	**Total Marks: 75**
Credit: 3	**PA and End Examination Scheme**
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 0 hrs/week	End Semester Theory:50 Marks Practical PA: 0 Marks

RATIONALE:

Estimating is a process of deciding the cost and material requirements for a definite purpose. The paper aims to develop such capacity in the student. Diploma holders in IDD are supposed to prepare material estimates for various civil works and Interior works namely, Brick work, R.C.C. casting, flooring, surface Plaster work, Electrical work, plumbing and Sanitary work, False ceiling, P.O.P. work, Painting and polishing etc. In addition, they must have basic knowledge regarding analysis of rates, contracting and tendering principles.

LEARNING OUTCOMES

After completing the course, the students will be able:

- To understand the conversion of units and their application.
- To understand the methods of finding the various quantities to be used in buildings.
- To take out the quantity-based estimates of the components of building.
- To analyze be rates of varies materials and labor components of the building.
- To acquire knowledge of specifications of various materials to be finalized for the application in a building or construction site.
- To find out the complete valuation of a constructed building or a purposed building.
- To acquire the detail knowledge of application of public health engineering components and their estimated quantities and the rates.
- To develop record keeping skills and drawing management in offices.

DETAILED CONTENTS

1. **SPECIFICATION: (10 lecture hours, 10 marks)**
   Specification and analysis of all types of interior design material such as paneling, partitioning, false ceilings, flooring, and floor covering, furniture, making specification for modern materials.

2. **ESTIMATING- (12 lecture hours, 10 marks)**
   Types of Estimates:
   - Preliminary estimates
   - Plinth area estimate
   - Cubic rate estimate
   - Estimate per unit base.
   - Detailed estimates

- Definition
- Stages of preparation
- details of measurement and calculation of quantities and abstract

Methods of preparing estimates, preparing bills of quantities from drawings and pricing Preparing estimates from bills of quantities.

3. TENDERING: (08 lecture hours, 10 marks)

Essential of tender documents. Preparation of schedules and progress charts. Study of writing schedules for civil work, furniture items finishing items, services, etc. Study of units, mode of measurements, system of calculating quantities of different items like furniture, wall finishes, floor finishes, civil and plumbing works related to interiors.

N.B.: Class problems should be given based on Estimation.

4. Preparation of measurement book for BOQ. (06 lecture hours, 10 marks)

5. Units for measurement & prepare BOQ. (06 lecture hours, 10 marks)

- Units of measurement for various items of work as per BIS:1200
- Rules for measurements
- Different methods of taking out quantities
- center line method and short wall and long wall method

INSTRUCTIONAL STRATEGY

This is an applied engineering subject. Teachers are expected to provide working drawings for various civil works and students be asked to calculate the quantities of materials required for execution of such works. Teachers should conceptualize making analysis of rates for different items of works. It will be advantageous if students are given valuation reports for reading.

RECOMMENDED BOOKS

1. Estimating and costing in civil engineering by Dutta B.N (in English & Hindi) UBS Publishers Distributors Ltd.
2. Estimating costing and valuation by Dr. R.P. Retholiya Prof. Bhavesh V. Modi and Mayur R. Rethaliya atal prakashan , Ahemdabad .
3. Civil Engineering Handbook by P.N. Khanna UBS Publishers.
4. Civil Engineering & Costing by Dr. Vinod Gupta and Manisha Agarwal Neelkanth Publishers Pvt. Ltd.
5. Estimating, Costing and Valuation (Civil) by Pasrija, HD, Arora, CL and S. Inderjit Singh; New Asian Publishers, Delhi,
6. Estimating and costing by Mahajan Sanjay; Satya Parkashan, Delhi
7. Estimating and Costing", Rangwala, BS; Anand, Charotar Book Stall
8. "A Text Book on Estimating and Costing (Civil) with Drawings"Kohli, D;

(ID402) PRODUCT DESIGN-II KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Topic 1	-	06	-	06
2	Topic 2	-	06	02	08
3	Topic 3	05	03	-	08
4	Topic 4	-	08	-	08
5	Topic 5	-	03	02	05
6	Topic 6	-	02	02	04
7	Topic 7	-	06	-	06
8	Topic 8	-	-	05	05
GRAND TOTAL					**50**

NAME OF THE SUBJECT : PRODUCT DESIGN-II	
Course code: ID402	**Semester: Fourth**
Teaching Scheme Credit: 4	**Total Marks: 100**
	PA and End Examination Scheme
Theory: 2 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 4 hrs/week	End Semester Theory:50 Marks Practical PA: 25 Marks

RATIONALE:

Furniture's, apart from its utility has its significant contribution to interior decoration. The knowledge of basic design ideas in furniture making is necessary for any professional interior designer.

LEARNING OUTCOMES

After completing the course, the students will be able to:

- Identify tools and equipment used and their respective functions.
- Identify different types of materials and their basic properties.
- Use and take measurements with the help of basic measuring tools/equipment.
- Anthropometric study of humans and in relation to surrounding objects.
- Study and analyze the sizes and sections of various materials to be used in furniture.
- Understand the joinery system of wood and other metals.
- Select and apply various upholstery materials for different furniture.
- Draw the detailed working drawings of furniture and its components.
- Study about legendary Architect's works and their characteristics.

DETAILED CONTENTS

1. Environmental conditions influencing furniture climate, social and economic conditions, versatile materials, and their availability. **(02 Lecture Hours,06 Marks)**

2. Applications of various materials used in furniture - wood, metals, furnishings, upholstery, plastics, laminates, glass. Methods of care and maintenance, economics of furniture durability, usability. **(04 Lecture Hours,08 Marks)**

3. Anthropometric sizes of furniture - sizes of furniture as related to the human body, working levels, viewing levels diagrammatic. **(05 Lecture Hours,08 Marks)**

4. Joinery as applied to furniture. **(06 Lecture Hours,08 Marks)**

5. Upholstered furniture in fabric, leatherette, and leather. **(02 Lecture Hours,05 Marks)**

6. Ornamental furniture: Mirrors, Pedestal, Lamps **(02 Lecture Hours,04 Marks)**

7. Designing and preparing working drawings and scaled model of basic furniture like tables, chairs (with or without arms), stools, counters and cabinets. **(04 Lecture Hours,06 Marks)**

8. A brief study of - **(03 Lecture Hours,05 Marks)**
   Furniture like Double Bed, Bunker Bed, Sofa Cum Bed, Chairs, Table, Sofa, Jewellery Box, Easy Chair, Rocking Chair, Chest, Stacking of furniture, Folding Chairs and Tables, Tubular Pipe Furniture (Aluminum, Steel, Stainless Steel, PVC), Leather Upholstered Furniture, Low Seating Furniture (Sofa & Bed), Modular Kitchen, Modular Wardrobes, Steel Railing, Steel Cladding in Interior, Toilet accessories, Stone, Marbles, Granite Furniture, Wrought Iron, Cast Iron, Toughened Glass, Molded Glass Furniture.
   Chairs designed by great architects- Frank Lloyd Wright (FLW), Ludwig Mies Van Der Rohe, Li-Corbusier, Charles Eames, Eero Saarinen.

NOTE: Visit to furniture workshop, collection of samples and information.

RECOMMENDED BOOKS

1- Chair Anatomy: Design and Construction by James Orrom ; Published by Thames and Hudson.

2- Eero Saarinen: Furniture for everyman by Brian Lutz.

3- Le- Corbusier: Furniture and Interior (1905-1965) by Arthur Ruegg.

(ID403) INTERIOR DESIGN-III (RETAIL OUTLET) KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE AND STUDIO WORK)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Case Study	-	-	-	0
2	Concept Development	-	-	-	0
3	Drafting	05	20		25
GRAND TOTAL					**25**

NAME OF THE SUBJECT : INTERIOR DESIGN-III (RETAIL OUTLET)	
Course code: ID403	**Semester: Fourth**
Teaching Scheme Credit: 5	**Total Marks: 150** **PA and End Examination Scheme**
Theory: 4 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 75 marks
Practical: 2 hrs/week	End Semester Theory: 25 Marks Practical PA: 25 Marks

RATIONALE:

A diploma student of interior design is supposed to prepare drawings for interiors of various types of spaces. Through this paper they are supposed to achieve the skill for preparing the interiors of various types of buildings, i.e., corporate offices, Showrooms, banks, restaurants, hotel lounge, Airport and station lounges and cinema theatre.

DETAILED CONTENTS

1. **CASE STUDY**

Case Study: Conceptualization of different types of similar spaces & making a report of merits & demerits. Market survey & creating the problem statement.

2. CONCEPT DEVELOPMENT

Creating concepts for design & making related sketches with concept sheet & area analysis keeping in view the requirements of the anthropometric & ergonomic standards.

3. DRAFTING (4 Lecture hours, 25 Marks)

Making related technical drawings (plan, elevations & details) with 3d views/perspective. Material board & costing.

INSTRUCTIONAL STRATEGY

This is one of the most important practical oriented subjects for diploma in interior Design and decoration. While imparting instruction, special visits may be arranged to demonstrate and explain important architectural features of different types of residential, commercial and public buildings. Practicing architects may be invited from time to time to present case studies and to deliver expert lectures on important elements like form, function, balance, light of shadow, shape, plane, volume, line, rhythm, proportions, textures and other such element appropriate to various designs. Teacher may present some of the already completed design works of practicing architects to the students and explain the important features and elements. Audio-visual material available in this field may be procured and presented to the students from time to time. Students should be encouraged to visit relevant web-sites and teachers should develop the design problems/assignments which can be taken up by the students using relevant and appropriate software. Students should be given group and independent design/drawing assignments and they should also maintain sketch book/portfolio of all the assignments given to them throughout the session. Teachers may conduct viva-voce on completion of each assignment. Students may present seminars towards the end of the session.

RECOMMENDED BOOKS

1- The interior design handbook by Frida Ramstedt; Published by Particular books. 2- The Color Scheme Bible by Anna Starmer; Published by Firefly Book Ltd.

3- Interior design and decoration by Premavathy Seetharaman and Parveen Pannu ; Published by CBS.

4- Elements of Style by Erin Gates; Published by Simon & Schuster.

5- Landscape Architecture by John O. Simonds published by M.C. Graw Hill, Book Company

6- Urban Landscape Design by Garnett Eckko Published by M.C. Graw Hill, Book Company

7- Landscape Design that saves energy by Anne Simon Majfat & Marc Schiler 8-

Flowering trees of India and beautiful gardens of India by M.S. Randhawa

(ID404) COMPUTER APPLICATION-II (CAD AND SKETCHUP) KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Project (Rendering of CAD project)	20
2	Making an existing 2-D plan drawing into 3D using SketchUp	30
	TOTAL	50

NAME OF THE SUBJECT : COMPUTER APPLICATION-II (CAD AND SKETCHUP)	
Course code: ID404	**Semester: Fourth**
Teaching Scheme Credit: 4	**Total Marks: 100**
	PA and End Examination Scheme
Theory: 2 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 50 marks
Practical: 4 hrs/week	End Semester Theory: 0 Marks Practical PA: 25 Marks

RATIONALE:
-To enable the student to develop the confidence to prepare the drawings of a given project through knowledge acquired in previous semester.

-To enable the student to create three dimensional objects in space with special emphasis on presentation and visualization of interiors and exteriors of building using different rendering techniques using SketchUp or the latest program.

Note: Relevant theory may be taught along with practical exercises in each topic.

1.**Project CAD drawing**

The design project done in 3rd semester as main project shall be taken up for preparing a complete set of drawings in CAD. These include all plans, elevations (minimum 2) and sections (2 minimum), showing all interior layouts, joinery schedule, tree plantations, parking layout etc.

3.**Making an existing 2-D plan drawing into 3D using SketchUp**

Exercises – 2: 4th Semester design proposal to be converted in 3-D model.

(ID405) BUILDING CONSTRUCTION AND MATERIALS-IV KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Theory/Drawing Doors	10	05	-	15
2	Theory/Drawing Interior of Buildings	10	10	-	20
3	Theory/Drawing Exterior of Buildings	10	05	-	15
4	Theory/Drawing R.C.C.	10	10	-	20
5	Prefabricated elements	-	02	03	05
GRAND TOTAL					**75**

NAME OF THE SUBJECT : BUILDING CONSTRUCTION AND MATERIALS-IV	
Course code: ID405	**Semester: Fourth**
Teaching Scheme Credit: 5	**Total Marks: 150**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 50 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 4 hrs/week	End Semester Theory: 75 Marks Practical PA: 25 Marks

RATIONALE:

Students of Architectural Assistantship at diploma level are supposed to prepare structural drawings, working drawings and detailed drawings of various components of buildings. Also students are expected to design small residential buildings. For this purpose, it is essential that students are taught various components of building construction comprising of: foundations, super structure, openings, roofs, staircases, flooring and finishing and other allied building components. Therefore, the subject of building construction is very important for students undergoing diploma course in architectural Assistantship. Teachers while imparting instructions are expected to show various components of buildings under construction, make use of models or other audio- visual media to clarify the concepts. While preparing drawings, teachers should lay considerable stress on proportioning, dimensioning, specification writing and printing and composition of drawing work. Teachers should also emphasis on environmental aspects like lighting, ventilation and orientation of buildings. Students should be asked to maintain ask etch book for recording the observations from site visits. While conducting viva, teachers should point out specific mistakes done by students in the preparation of drawings.

DETAILED CONTENTS

Theory/ Drawing

1. **Doors**: **(06 lecture hours, 15 marks)**

Paneled, Glazed and Sliding Windows: Casement, Fixed, Sliding Windows

- Using different aluminum sections.
- Anodizing of aluminum sections.
- Beadings in conjunction with aluminum section.

2. **Interiors of Buildings (10 lecture hours, 20 marks)**

- False ceilings
- Different counters as per usage
- Paneling of wall, side boards and ward robes
- Design and Drawing Partition

3. **Exteriors of Buildings (10 lecture hours, 15 marks)**

- Name plate & Letter Box
- Boundary walls and gates
- Drawing of grill, railing, parapet

4. R.C.C. (14 lecture hours, 20 marks)

a. Detail of R.C.C in, Foundations, column, beams, and slab Along with steel reinforcement details.
b. types of stairs in R.C.C.

c. Expansion Joints: Necessity, Location & detailing
d. Green Concrete: High Performance, Use of recycled materials and wastes

5. **Prefabricated Elements**- **(02 lecture hours, 05 marks)**

Advantages and Applications

RECOMMENDED BOOKS

1. Building Construction Handbook by Roy Chudley (Publisher Butterworth-Heinemann,1958)
2. McKay's Building Construction by William Barr Mckay (Publisher Donhead,2005)
3. Building Construction by B.C. Punmia (Laxmi Publications ltd.)
4. Principles of Building Construction by Madan Lal Mehta (Publisher PearsonEducation,limited, 2007)
5. Building Construction by Sushil Kumar (published by swastika publications)
6. Civil Engineering Drawing by V.B. Sikka (published by S.K. Kataria &sons)

(ID406) PROFESSIONAL PRACTICES-III including Industrial Visit
KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Lectures	20
2	Group discussion	15
3	Student activities	15
GRAND TOTAL		**50**

NAME OF THE SUBJECT : PROFESSIONAL PRACTICE-III	
Course code: ID406	**Semester: Fourth**
Teaching Scheme Credit: 1	**Total Marks: 50**
	PA and End Examination Scheme
Theory: 0 hrs/week	Theory PA: 0 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 2 hrs/week	End Semester Theory:0 Marks Practical PA:50 Marks

RATIONALE:

This subject will deliver knowledge education beyond acquiring the degree but for the purpose of practice with the following objectives:

- Search information from different sources for preparing notes on given topic.
- Present given topic in a seminar. Interact with peers to share thoughts.
- Prepare a report on industrial visit, expert lecture.

Suggested List of activities to be done:

1. **Lectures by Professional / Industrial Expert / Student Seminars-**
   To help prepare the students in finalizing their major project topic**. (09 lecture hours, 20 marks)**

2. **Group Discussion (9 lecture hours, 15 marks)**
3. **Student Activities: (10 lecture hours, 15 marks)**

The students in a group of 3 to 4 will perform one activity (Faculty members of the concerned discipline may provide a list of activities)

(ID407) ENVIRONMENTAL STUDIES KCA DISTRIBUTION

1	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Ecological systems	-	3	2	5
2	Disaster Management	5	-	1	6
3	Natural resources and its Management	-	3	2	5
4	Environment and Pollution	-	3	2	5
5	Resource Economics	-	3	2	5
6	Environmental Economics	-	3	2	5
7	Sustainable Development	5	-	1	6
8	Resource Conservation	-	3	2	5
9	Environmental Education	-	3	2	5
10	Energy Generation from Waste	-	3	2	5
11	Ecological Principles	-	3	2	5
12	Industrial and Biochemical Waste	5	-	1	6
13	Sustainable Agriculture	5	-	1	6
14	Research Methodology	5	-	1	6
GRAND TOTAL					**75**

NAME OF THE SUBJECT : ENVIRONMENTAL STUDIES	
Course code: ID407	**Semester: Fifth**
Teaching Scheme Credit: 3	**Total Marks: 100** **PA and End Examination Scheme**
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 0 marks
Practical: 0 hrs/week	End Semester Theory:75 Marks Practical PA: 0 Marks

Course Objectives:

Environmental Studies is an interdisciplinary course including topics from various subjects like geology, physics, chemistry, biology, ecology, earth science and many others. The course focuses on the environment and different processes that take place on Earth. Relevant issues of global warming, pollution, floods, earthquakes, waste management and sustainable development have been given a lot of importance in the course. Environmental Studies course is offered at different levels from UG, PG to doctoral programs. Environmental Studies course has recently been very popular among students because of its relevance and career opportunities.

Topics to be taught- (42 Lecture hours, 75 Marks)

1. Ecological Systems
2. Disaster Management
3. Natural Resources and its Management
4. Environment and Pollution
5. Resource Economics
6. Environmental Economics
7. Sustainable Development
8. Resource Conservation
9. Environmental Education
10. Energy Generation from Waste
11. Ecological Principles
12. Industrial and Biochemical Waste
13. Sustainable Agriculture
14. Research Methodology

SEMESTER V

(ID501) COSTING AND ESTIMATION-II KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Methods of taking out estimates	06	04	02	12
2	Analysis of rates	10	03	03	16
3	Specifications	06	04	02	12
4	Accounts	-	06	04	10
GRAND TOTAL					**50**

NAME OF THE SUBJECT : COSTING AND ESTIMATION II	
Course code: ID501	**Semester: Fifth**
Teaching Scheme Credit: 3	**Total Marks: 75** **PA and End Examination Scheme**
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 0 hrs/week	End Semester Theory:50 Marks Practical PA:0 Marks

Course Objectives:
To develop the necessary skills for estimation and writing specifications for various types of building interiors, development, and tendering work.

Learning Outcomes: The students will learn how to calculate the cost and quantities of any projects in detail and the related process.

Detailed Syllabus:

1. **Method of taking out estimates: (10 lecture hours, 12 marks)**
   - **1.1** Different methods of taking out quantities: Centre line in- to-in/out-to-out methods
   - **1.2** Preparation of detailed estimates of earthwork, masonry, concreting, flooring, plastering, white washing and painting, wood, and steel work, RCC work and sanitary fittings

2. Analysis of Rates: (13 lecture hours, 16 marks)

2.1 Calculation of rates of the main item of construction including rate analysis for construction materials, schedule of rates
2.2 Steps in the analysis of rates for the following items of work, requirement of material, labor, sundries, and contractor's profit.
2.3 Earth work in excavation in foundation and trenches.
2.4 Earth work in filling in foundation, trenches and up to plinth level.
2.5 Plain Cement concrete in foundation.
2.6 Brick work in foundation
2.7 Brick work in super structure.
2.8 Plastering and pointing.
2.9 Flooring.
2.10 R.C.C. work in foundations, columns, beams, lintels, and sunshade.
2.11 R.C.C. work in roof slab.
2.12 Woodwork in doors and windows frames.
2.13 Woodwork in shutters of doors and windows.
2.14 White washing, distempering, waterproof cement paint on walls and ceiling.
2.15 Painting or polishing on doors and windows.

3. Specifications: (11 lecture hours, 12 marks)

3.1 Principles of specifications writing
3.2 Writing broad specifications of items of construction with special reference to two storied building.

4. Accounts: (8 lecture hours, 10 marks)

Accounts: Explanation of ordinary terms used in bookkeeping, cash book, work order, measurement

book,petty cash and impress, receipts.

RECOMMENDED BOOKS:

1. Estimating, Costing and Accounts by DD Kohli and RC Kohli (Published by S Chand and Co)
2. Estimating and costing by BN Dutta (Published by S Dutta and Company, 1995)
3. Quantity surveying and Valuation by R.K. Bhutani (Published by Ishan Publication)

(ID502) INTERIOR DESIGN-IV (OFFICE SPACES) KCA DISTRIBUTION

Sl.no	TOPIC	KNOWLEDGE (DESCRIPTIVE/WORKING DRAWINGS AND SHEETS)	COMPREHENSION	APPLICATION (MCQs/Fill in the blanks)	TOTAL
1	Case Study	-	-	-	-
2	Concept development	-	-	-	-
3	Drafting	05	20	-	25
GRAND TOTAL					**25**

NAME OF THE SUBJECT : INTERIOR DESIGN IV	
Course code: ID502	**Semester: Fifth**
Teaching Scheme Credit: 6	**Total Marks: 150** **PA and End Examination Scheme**
Theory: 4 hrs/week	Theory PA: 25 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 4 hrs/week	End Semester Theory:100 Marks Practical PA:25 Marks

Course Objectives:

1.To study and develop innovative schemes for commercial spaces. Knowledge of working drawings is also intended.

2.. The main aim is to develop visually literate students who are proficient at analytical thinking, conceptualization and the problem-inquiry, solution cycle.

1. **CASE STUDY**

Case Study: Conceptualization of different types of similar spaces & making a report of merits & demerits. Market survey & creating the problem statement.

2. **CONCEPT DEVELOPMENT**

Creating concepts for design & making related sketches with concept sheet & area analysis keeping in view the requirements of the anthropometric & ergonomic standards.

3. **DRAFTING (4 Lecture hours, 25 Marks)**

Making related technical drawings (plan, elevations & details) with 3d views/perspective. Material board & costing.

Reference Books: Diamonstein, Barbaralec; *Interior Design: The New Freedom;* 1st Ed.; 1982; Rizzoli International Publications; New York.

(ID503) COMPUTER APPLICATION-III (AUTOCAD AND SKETCHUP) KCA

Sl.no	TOPIC	TOTAL
1	Project (Rendering of SketchUp)	15
2	Working with Photoshop	10
3	Making an existing 2D into 3D	25
	TOTAL	50

NAME OF THE SUBJECT : COMPUTER APPLICATION-III (AUTOCAD AND SKETCHUP)	
Course code: ID503	**Semester: Fifth**
Teaching Scheme Credit: 6	**Total Marks: 100**
	PA and End Examination Scheme
Theory: 4 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 50 marks
Practical: 4 hrs/week	End Semester Theory:0 Marks Practical PA:25 Marks

Course Objectives:

-To enable the student to develop confidence in preparing drawings of a given project through knowledge acquired in the previous semesters.

-To enable the students to create three dimensional objects in space with special emphasis on presentation and visualization of interiors and exteriors of building using different rendering techniques using SketchUp or the latest program.

DETAILED CONTENTS

Note: Relevant theory may be taught along with practical exercises in each topic.

1.**Project (Rendering of SketchUp drawing) (04 lecture hours, 15 marks)**

The design problem done in 4th semester as main project shall be taken up for preparing a complete set of drawings. These include all plans, elevations (minimum 2) and sections (2 min), showing all interior layouts, joinery schedule, tree plantations, parking layout etc.

2.**Working with Photoshop (12 lecture hours, 08 marks)**

a) Exporting image
b) Basic Features
c) Working with layers
d) Working with multiple images
e) Working with colors and swatches
f) Using gradient

3.**Making an existing 2-D plan drawing into 3D using SketchUp** (**20 lecture hours, 20 marks)**

Exercises – 2: 4th Semester design proposal to be converted in 3-D model.

ID504 PORTFOLIO/DISPLAY

NAME OF THE SUBJECT : PORTFOLIO/DISPLAY	
Course code: ID504	**Semester: Fifth**
Teaching Scheme **Credit: 5**	**Total Marks: 75**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 50 marks
Practical: 4 hrs/week	End Semester Theory:0 Marks Practical PA:0 Marks

Course Objectives:

It is important to maintain the portfolio as it is the living document that can highlight the student's talent in the positive light.

Maintaining the portfolio will help students to reflect the work that will help them secure a job easily. The samples of work will work like performance review that reflects the skills and experience of the designer. It is an ever-evolving document that can progress with the growth of the professional.

The portfolio is the important document for the interior designer as it shows the faith the person has in his/her work. So, it needs the presentation in the best way that will highlight the valuable aspects. With an unforgettable portfolio, a budding interior designer can push forward to taste success.

(ID505) PROFESSIONAL PRACTICES-IV KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Lectures	15
2	Group discussion	20
3	Report	15
GRAND TOTAL		**50**

NAME OF THE SUBJECT : PROFESSIONAL PRACTICE IV	
Course code: ID505	**Semester: Fifth**
Teaching Scheme Credit: 1	**Total Marks: 50** **PA and End Examination Scheme**
Theory: 0 hrs/week	Theory PA: 0 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 2 hrs/week	End Semester Theory:0 Marks Practical PA: 50 Marks

RATIONALE:

This subject will deliver knowledge education beyond acquiring the degree but for the purpose of practice with the following objectives:

- Search information from different sources for preparing notes on given topic.
- Present given topic in a seminar. Interact with peers to share thoughts.
- Prepare a report on industrial visit, expert lecture.

Suggested List of activities to be done:

1. Industrial Training: (09 lecture hours, 15 marks)

Industrial training (Minimum 4 weeks) during the winter break of 5th semester. This could be arranged with the help of the institute.

2. **Lectures by Professional / Industrial Expert / Student Seminars (09 lecture hours, 20 marks)**

To help prepare the students in finalizing their major project topic.

3. Report (10 lecture hours, 15 marks)

Submitting a report on the topic the students are drawn to for their thesis project for the 6th Semester

(ID506) UNIVERSAL HUMAN VALUES MARKS DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Introduction to Value Education	10
2	Harmony in the Human Being	10
3	Harmony in the Family and Society and Harmony in the Nature	10
4	Social Ethics	10
5	Professional Ethics	10
GRAND TOTAL		**50**

NAME OF THE SUBJECT : Universal Human Values	
Course code: ID506	**Semester: Fifth**
Teaching Scheme Credit: 3	**Total Marks: 50**
	PA and End Examination Scheme
Theory: 2 hrs/week	Theory PA: 0 marks
Tutorial: 0 hrs/week	Practical End Exam: 0 marks
Practical: 2 hrs/week	End Semester Theory: 0 Marks Practical PA: 50 Marks

RATIONALE

The methodology of this course is universally adaptable, involving a systematic and rational study of the human being vis-à-vis the rest of existence. It is free from any dogma or value prescriptions. This process of self-exploration takes the form of a dialogue between the teacher and the students to begin with and within the student himself/herself finally.

COURSE OBJECTIVE:

1. To create an awareness on Engineering Ethics and Human Values.
2. To understand the social responsibility of an engineer.
3. To appreciate ethical dilemma while discharging duties in professional life.

COURSE OUTCOMES:

On completion of this course, the students will be able to-

1. Understand the significance of value input in a classroom and start applying them in their life and profession.
2. Distinguish between values and skills, happiness and accumulation of physical facilities, the Self and the Body, Intention and Competence of an individual, etc.
3. Understand the role of a human being in ensuring harmony in society and nature.
4. Distinguish between ethical and unethical practices and start working out the strategy to actualize a harmonious environment wherever they work.

COURSE CONTENT:

UNIT I: Introduction to Value Education

1. Value Education, Definition, Concept and Need for Value Education.
2. The Content and Process of Value Education.
3. Basic Guidelines for Value Education.
4. Self-exploration as a means of Value Education.
5. Happiness and Prosperity as parts of Value Education.

UNIT II: Harmony in the Human Being

1. Human Being is more than just the Body.
2. Harmony of the Self ('I') with the Body.
3. Understanding Myself as Co-existence of the Self and the Body.
4. Understanding the Needs of the Self and the Needs of the Body.
5. Understanding the activities in the Self and the activities in the Body.

UNIT III: Harmony in the Family and Society and Harmony in the Nature

1. Family as a basic unit of Human Interaction and Values in Relationships.

2. The Basics for Respect and today's Crisis: Affection, e, Guidance, Reverence, Glory, Gratitude and Love.
3. Comprehensive Human Goal: The Five Dimensions of Human Endeavour.
4. Harmony in Nature: The Four Orders in Nature.
5. The Holistic Perception of Harmony in Existence.

UNIT IV: Social Ethics

1. The Basics for Ethical Human Conduct.
2. Defects in Ethical Human Conduct.
3. Holistic Alternative and Universal Order.
4. Universal Human Order and Ethical Conduct.
5. Human Rights violation and Social Disparities.

UNIT V: Professional Ethics

1. Value based Life and Profession.
2. Professional Ethics and Right Understanding.
3. Competence in Professional Ethics.
4. Issues in Professional Ethics – The Current Scenario.
5. Vision for Holistic Technologies, Production System and Management Models.

REFERENCE BOOKS

1.Corliss Lamont, Philosophy of Humanism

2.Gaur. R.R. , Sangal. R, Bagaria. G.P, A Foundation Course in Value Education, Excel Books, 2009.

3.Gaur. R.R. , Sangal. R , Bagaria. G.P, Teachers Manual Excel Books, 2009.

4.I.C. Sharma . Ethical Philosophy of India Nagin & co Julundhar

5.Mortimer. J. Adler, – Whatman has made of man.

6.William Lilly Introduction to Ethic Allied Publisher

SEMESTER VI

NAME OF THE SUBJECT : THESIS (FINAL PROJECT)	
Course code: ID601	**Semester: Sixth**
Teaching Scheme **Credit: 10**	**Total Marks: 200**
	PA and End Examination Scheme
Theory: 4 hrs/week	Theory PA: 50 marks
Tutorial: 0 hrs/week	Practical End Exam: 100 marks
Practical: 12 hrs/week	End Semester Theory:0 Marks Practical PA: 50 Marks

Course Objectives:
To provide an opportunity to the students to handle a complete design project of their own choice in a practicable manner using their creative ability. This will prepare them for the challenges of the practical world once they graduate.

Learning Outcomes:
The students will learn-

1. To handle large scale design problems.
2. To come out with comprehensive design solutions and manage the profession at ease.
3. Final Thesis that will showcase their detailed work.

Detailed Syllabus:

Synopsis, Case Study, Site Analysis and Area Programming:

- Synopsis - Brief introduction of the proposed thesis / project.
- Literature study and Case Studies - Live & literature, to form a basis for their own design.
- Site Analysis - Record and evaluate information on the site and its surroundings, and to use this evaluation in the design response.

Area Analysis and Program - Comparative statement of the various available design standards, areas provided in the various case studies and the area requirements, so that the area requirements for the various functions / spaces for the proposed project can be finalized.

Schematic Design:

- Generate ideas based on the studies (case studies / literature studies / area analysis) conducted so far in the form of conceptual drawings, sketches, and models.
- Basic concept explaining the principal ideas / thought process for the project in terms of planning / built form / massing of different components, leading to the design, through sketches / 3D images / block models etc.

Design Detailing:

- The schematic drawings presented in the previous module needs to be detailed out as per the comments/ suggestions received from the guides and the reviewers.
- The detailed drawings as per the final area program with due consideration to structural and service requirements of the project needs to be prepared.

Design Finalization:

- Pre-Final Design - Final drawings, views, models, etc. incorporating the comments received in the previous reviews.
- Final Thesis Submission – Submission of all the submittals (drawings, views, models, report, etc.) complete in all respects as per the comments and suggestions received from thesis guide and various review members.

Textbooks:

1. As per requirement of topic and as suggested by the thesis guide.

Reference Books:

1. As per requirement of topic and as suggested by the thesis guide.

NAME OF THE SUBJECT : PORTFOLIO/DISPLAY	
Course code: ID602	**Semester: Sixth**
Teaching Scheme Credit: 5	**Total Marks: 75**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 50 marks
Practical: 4 hrs/week	End Semester Theory:0 Marks Practical PA:0 Marks

RATIONALE:

It is important to maintain the portfolio as it is the living document that can showcase the student's talent in the positive light.

Maintaining the portfolio will help students to reflect the work that will help them secure a job easily. The samples of work will work like performance review that reflects the skills and experience of the designer. It is an ever-evolving document that can progress with the growth of the professional.

The portfolio is the important document for the interior designer as it shows the faith the person has in his/her work. So, it needs the presentation in the best way that will highlight the valuable aspects. With an unforgettable portfolio, a budding interior designer can push forward to taste success.

(ID603) PROFESSIONAL PRACTICES-V KCA DISTRIBUTION

Sl.no	TOPIC	TOTAL
1	Lectures	30
2	Group discussion	20
GRAND TOTAL		**50**

NAME OF THE SUBJECT : PROFESSIONAL PRACTICE-V	
Course code: ID603	**Semester: Sixth**
Teaching Scheme Credit: 1	**Total Marks: 50** **PA and End Examination Scheme**
Theory: 0 hrs/week	Theory PA: 0 marks
Tutorial: 1 hrs/week	Practical End Exam: 0 marks
Practical: 2 hrs/week	End Semester Theory:0 Marks Practical PA: 50 Marks

RATIONALE:

This subject will deliver knowledge education beyond acquiring the degree but for the purpose of practice with the following objectives:

- Search information from different sources for preparing notes on given topic.
- Present given topic in a seminar. Interact with peers to share thoughts.
- Prepare a report on industrial visit, expert lecture.

Suggested List of activities to be done:.

1. **Lectures by Professional / Industrial Expert / Student Seminars – (09 lecture hours, 30 marks)**

To help prepare the students in guiding the students their major project topic.

2. **Group Discussion (10 lecture hours, 15 marks)**

(ID604) 'BASICS AND MANAGEMENT OF ENTREPRENEURSHIP DEVELOPEMENT'
KCA DISTRIBUTION

NAME OF THE SUBJECT	: Basics and Management of Entrepreneurship Development
Course code: ID604	**Semester: Sixth**
Teaching Scheme Credit: 3	**Total Marks: 100**
	PA and End Examination Scheme
Theory: 3 hrs/week	Theory PA: 25 marks
Tutorial: 0 hrs/week	Practical End Exam: 0 marks
Practical: 0 hrs/week	End Semester Theory:75 Marks Practical PA: 0 Marks

RATIONALE

In present scenario, there is an urgent need to develop right kind of attitude, knowledge and skills amongst the Diploma engineers leading them to achieve gainful wage/self-employment. There is a huge gap in perceptions of employers and employees regarding meeting the job requirements. Also, the dual challenges of competing in global working environment and keeping pace with the rapid technological advancements call for re-design of curricula and thus enabling the importance of generic and managerial skills. Entrepreneurship development aim at developing conceptual understanding for setting up owns' business/enterprise to cope up with the problem of unemployment and to promote the socio- economic development of our country. Both the subject areas, "Basics of Management and entrepreneurship development" are supplementary to each other. Knowledge and skills of these must be imparted to diploma engineering students for enhancing their employability and confidence in their personal and professional life.

DETAILED CONTENTS

1. Introduction to Management **(07 hrs)**

Definitions and concept of Management

Functions of management- planning, organizing, staffing, coordinating, and controlling.Various areas of management Structure of an Organization

2. Self-Management and Development (10 hrs)

Life Long Learning Skills, Concept of Personality Development, Ethics and Moral values Concept of Physical Development; Significance of health, hygiene, body gesturesTime Management Concept and its importance

Intellectual Development: Reading skills, speaking, listening skills, writing skills (Note taking, rough draft, revision, editing and final drafting), Concept of Critical Thinking and Problem Solving (approaches, steps and cases)

Psychological Management: stress, emotions, anxiety and techniques to manage these.

ICT & Presentation skills; use of IT tools for good and impressive presentations

3. Team Management

(10 hrs)

Concept of Team Dynamics. Team related skills, managing cultural, social and ethnic diversity in a team. Effective group communication and conversations. Team building and itsvarious stages like forming, storming, norming, performing and adjourning. Leadership, Qualities of a good leader. Motivation, Need of Motivation, Maslow's theory of Motivation Project Management (5 hrs)

Stages of Project Management; initiation, planning, execution, closing and review(through case studies), SWOT analysis concept

4. Introduction to Entrepreneurship

(10 hrs)

Entrepreneurship, Need of entrepreneurship, and its concept, Qualities of a goodentrepreneur

Business ownerships and its features; sole proprietorship, partnership, joint stockcompanies, cooperative, private limited, public limited, PPP mode

Types of industries: micro, small, medium and large

5. Entrepreneurial Support System (Features and Roles in Brief)

(7 hrs)

District Industry Centers (DICs), State Financial Corporations (SFCs), NABARD MSME (Micro, Small, Medium Enterprises) – its objectives & list of schemes

6. Market Study and Opportunity Identification

(7 hrs) Types of market study: primary and secondary, product or service identification, assessment of demand and supply, types of survey and their important features

7. Project Report Preparation

(8 hrs)

Preliminary Report, Techno-Economic Feasibility Report, Detailed Project Report (DPR)

LIST OF TUTORIAL EXERCISES

1. Understanding Self-Management and Development (Related to Chapter 02); through examples, cases, exercises, panel discussions, seminars, meditation and yogatechniques.
2. SWOT Analysis.
3. Team Management (Related to chapter 03); through examples, cases, role plays, group discussions and panel discussions.
4. Market Study and Opportunity Identification (Related to Chapter 07); through literature reviewing, making questionnaires, conducting mock interviews and analyzing data for product/service identification and demand assessment.
5. Project Management and Project Report Preparation through exercises on making project reports on micro and small enterprises. Case studies and SWOT analysis of projects can be taken.

RECOMMENDED BOOKS

1. Generic Skill Development Manual, MSBTE, Mumbai
2. Lifelong Learning, Policy Brief(www.oecd.orf)
3. Towards Knowledge Society, UNESCO Publication, Paris
4. Entrepreneurship Development by CB Gupta and P Srinivasan: Sultan Chand and sons:NewDelhi
5. Essentials of Management by H Koontz, C O' Daniel , McGraw Hill
6. Principles and Practice of Management by Shyamal Bannerjee: Oxford and IBM Publishing Co, New Delhi
7. Management by James AF Stoner, R Edward Freeman and Daniel R Gilbert Jr.,Prentice Hallof India Pvt. Ltd, New Delhi
8. Entrepreneurship Development by S. L. Gupta and Arun Mittal: IBH Publication
9. A Handbook of Entrepreneurship, Edited by B S Rathore and Dr. J S Saini
10. Entrepreneurship Development and Small Business Enterprises by Poornima M:PearsonEducation India
11. Handbook of Small Scale Industry by P M Bhandari