

**BOARD OF TECHNICAL EDUCATION, RAJASTHAN,  
JODHPUR**

**RULES AND REGULATION FOR DIPLOMA COURSES IN  
NON-ENGINEERING FOR THE YEAR 2005-2006 AND  
ONWARDS**

**1. DEFINITIONS :**

- Board** : Means, Board of Technical Education, Rajasthan, Jodhpur constituted by Government of Rajasthan.
- Chairman** : Means, the Chairman of the Board, Ex - officio Director of Technical Education, Rajasthan, Jodhpur.
- Secretary** : Means, Joint Director Cum-Secretary of Board.
- Registrar** : Means, the Deputy Director (Registrar) of Board.
- Diploma course** : Means, 2 years/3 years (excluding practical training duration) diploma course in branch of non-engineering recognized by the Board.
- Affiliated Institution** :
- Principal** : Means, the Principal or the Head of the affiliated Institution.
- Regular Student** : Means, a student who is eligible to pursue a regular course of study i.e. to attend regular classes in a particular year in which he/she wants to appear in the examination in the institution in which he has been enrolled by the Board.
- Ex-Student** : Means, a student who has completed a regular course of study as prescribed by the Board during a year, but fails in the theory and /or practical examination and is eligible to reappear in theory and / or practical examination in one or more subjects

- Examination** : Means, any examination conducted by the board.
- Year** : Means, an academic session for example first year means the first academic session of the prescribed course of study. Similarly second year and third year means second and third academic session respectively.

**2. ADMISSION QUALIFICATIONS AND ENROLMENT :**

- 2.1 The minimum qualification for admission to a Diploma Course in an affiliated institution shall be as prescribed by the Government of Rajasthan from time to time.
- 2.2 No student shall be admitted to any examination of the Board unless he/she has been enrolled with the Board. A student during his enrolment with the Board can not enroll himself with any other Board/ University. If any such case is reported, the enrolment of the student with the Board will be cancelled and he/she will not be allowed to appear in any of the examinations on a course, ex conducted by the Board.

**3. DURATION AND COURSE STUDY** : Duration of Diploma Course shall extend over the period prescribed by the Board at an affiliated institution for regular students and the course of study shall consist of subjects, prescribed by the Board in the Teaching and Examination Scheme from time to time.

**4. EXAMINATION SCHEME** : The valuation of the students shall be done by the Board or by the affiliated institution on behalf of the Board as per Teaching and Examination scheme. Theory and practical Examination will be conducted by the Board at the end of each year in accordance with the prescribed Teaching and Examination Scheme at such centres and on such dates as may be notified by the Board.

- 4.1 THEORY EXAMINATION (TH): These shall be conducted by the Board at the end of each year in the subjects listed under "TH" in the Teaching and Examination Scheme.
- 4.2 PRACTICAL EXAMINATION (PR): These shall be conducted at the institution on behalf of the Board at the end of each year in the subjects listed under "PR". The mode of such examination will be as per the Teaching and Examination Scheme
- 4.3 SESSIONAL ASSESSMENT : This will be done by the affiliated institution on behalf of Board on the basis of day to day work consisting of class tests listed under "CT" and regular Practical work done during the course of study listed under "PR(S)" in Teaching and Examination Scheme. Three class tests will be conducted by the institution for each subject in a year on behalf of the Board but marks for best two tests will be counted.
- 4.4 PRACTICAL TRAINING ASSESSMENT: On completion of training the assessment will be done by a committee constituted by the institution as per directives of the Board.
- 4.5 PROJECT ASSESSMENT: Diploma course students have to complete a project, wherever applicable, after final year examination as per Teaching & Examination Scheme. The assessment of the project will be done as per directives of the Board.
- 4.6 PRACTICAL TRAINING & PROJECT ASSESSMENT: On completion of "Practical Training & project" the assessment will be done by a committee constituted by the institution as per directives of the Board.

## 5. ELIGIBILITY FOR EXAMINATION :-

- 5.1 For eligibility to appear in the Examination a student must have attended at least 75% of the lectures

delivered in each subject during the year and must also have attended at least 75% of the practicals conducted in each subject during the year. The deficiency in attendance in theory classes to the extent of 5% may be condoned by the Principal and an additional 5% by the Chairman for specific reason.

- 5.2 A student who does not fulfill the prescribed condition as mentioned in 5.1 shall not be allowed to appear in the examination. The detention orders shall be issued by the Head of the Institution on behalf of the Board.
- 5.3 A student who is not eligible to appear in the examination under regulation 5.1 shall repeat the course of study as a regular student. Such students shall not be permitted, where applicable, to keep term in the next higher class.

### 5.4 CHECK POINT:

- 5.4.1 A two/three year Diploma course student has to pass Diploma course by the end of four/six academic years respectively from the year of enrolment failing which his/her enrolment with the Board will automatically be cancelled.
- 5.4.2 Three Year Diploma: A student has to pass all the subjects of first year and Second year by the end of fourth academic year except under rule 6.7 from the year of enrolment failing which his/ her enrolment with the Board will automatically be cancelled.
- 5.4.3 Two Year Diploma : A student has to pass all the subjects of first year by the end of second academic year except under rule 6.7 from the year of enrolment failing which his/ her enrolment with the Board will automatically be cancelled.
- 5.5 Time limit to pass all subjects of Diploma course will not be extended for any punishment by the institution and for the punishment awarded by the Board for the use of unfair means in the examination.

## 6. PASSING STANDARDS:-

- 6.1 33% marks in each theory examination in the subjects listed under "TH" in the Teaching and Examination Scheme.
- 6.2 45% marks in each practical examination in the subjects listed under "PR" in the Teaching & Examination Scheme.
- 6.3 45% marks in consolidated sessionals [PR(S) + CT] of all subjects listed under "PR(S)" and "CT" in the Teaching and Examination Scheme.
- 6.4 Deficiency to the extent of 5 marks in a subject (TH, PR and consolidated sessionals) and up to 10 marks in a year may be condoned by the chairman. Deficiency will not be condoned in more than two subjects in a year. The student whose deficiency in a subject has been condoned will be deemed to have passed the subject. Condonation will be given first in consolidated sessionals then in practical and lastly in theory subject/ subjects. Condonation marks will be awarded to a student in the eligible subject/ subjects only after he/she has passed all the remaining subjects of the concerned year.
- 6.5 A Diploma student who passes in all subjects in first/ second year shall be promoted to second/ third year respectively.
- 6.6 A Diploma student, who fails in consolidated sessional of any year will not be promoted to higher class. Such student will be declared failed and he/she will have to repeat the year in which he/she fails in consolidated sessionals as a regular student.
- 6.7 A Diploma student who passes in consolidated sessionals but fails in Theory/ Practical examination in first/ second year in not more than two subjects, (Theory and Practical of a subject will be treated as one subject) will be allowed to keep term in second/ third year

respectively He/she will be allowed to reappear as Ex student in these subjects in the next year examination as and when held.

- 6.8 A Diploma student who passes in consolidated sessionals of final year but fails in Theory/ Practical Examination of final year will be allowed to reappear in a special examination for final year to be conducted after suitable interval.
- 6.9 Only those diploma students who have passed all Theory/ Practical subjects other than final year shall be allowed in the special examination for final year.
- 6.10 The special examination will be treated as part of the regular examination.
- 6.11 A Diploma student who passes in consolidated sessionals but fails in more than two subjects of first /second year Theory /Practical examination, is not eligible to keep term in the next higher class but may reappear in TH/PR or both as Ex-student in the subject/ subjects in which he/she fails in next year examination as and when held.
- 6.12 A Diploma student who reappear in Theory / Practical examination as Ex-student will retain full credit of consolidated sessional marks and marks of Theory / Practical examination for subject/Subjects in which he/she does not reappear.
- 6.13 A Diploma student can not be given the benefit of condonation for the purpose of deciding promotion under regulation. Only the student failing in one or two subjects in any year examination can be given the benefit of condonation.

## 7. AWARD OF DIPLOMA :

- 7.1 A student will become eligible for award of a Diploma after passing in all subjects of Diploma Course.

## 7.2 FINAL AGGREGATE FOR DIPLOMA COURSE FOR AWARD OF DIVISION.

### 7.2.1 FOR 3 YEAR DIPLOMA COURSE -

- (i) 40% of the aggregate marks of I Year.
- (ii) 60% of the aggregate marks of II Year,
- (iii) 100% of the aggregate marks of III Year.

### 7.2.2 FOR 2 YEAR DIPLOMA COURSE :-

- (i) 50% of the aggregate marks of I Year,
- (ii) 100% marks of the aggregate marks of II Year.

**7.3 AWARD OF DIVISION:** The division will be awarded to successful Diploma students on the basis of final percentage of marks as given below.

- (i) 75% or more : I Division with Honours
- (ii) 60% or more but less than 75% : I Division.
- (iii) 45% or more but less than 60% : II Division.
- (iv) Less than 45% but more than the: Pass Class passing standards as stated in Rule 6.0

### 7.4 MERCY GRACE MARK:

- (i) Only 1 mercy grace mark will be awarded to those students whose Division is changed with the help of this mercy grace mark
- (ii) Mercy grace mark will be awarded to those students only who have passed all the subjects of Diploma Course.
- (iii) Mercy grace mark will be added in the grand total of the details of marks to award division and not in the marks of any particular semester or subject.

**8. MERIT:** Students who pass all subjects of a Diploma course in single attempt without any condonation and within prescribed duration of the course will be considered for the merit as per rules of the Board.

### 9. IMPROVEMENT :

9.1 A student who passes in all subjects of Diploma may be allowed one chance for improvement of his/her performance.

9.2 Such students will be permitted to reappear only in Theory papers of one or more subjects of final year, as ex-student only in the next examination.

9.3 The student who avails of chance for improvement of his/her performance will retain full credits of marks except the theory marks of subjects in which he/she reappears. If the student scores lesser aggregate marks or fails in one or more subjects during his chance for improvement, the aggregate marks and division scored by him/her in the previous examination will stand and no further chance for improvement would be allowed to him/her.

9.4 Such improvement of marks will be counted only for the purpose of division and not for Merit.

**10.** Any student debarred or rusticated by the competent authority will not be eligible to appear in any examination from the date of issue of such orders.

**11.** These Rules and Regulation shall come into force for student admitted from the year 2005-2006 and onwards.

**12.** Students pursuing a Diploma Course of recognized state Board of Tech Education or University may be permitted to migrate to this Board in accordance with rules of the Board.

13. A student who completes a course of study in a branch and become eligible for award of a Diploma may be permitted to study and appear in the second Diploma examination in accordance with rules of the Board.
14. If a student is unable to pass regularly the course of study prevailing at the time of admission then he/ she is liable to be shifted in the consecutive new scheme, if any, introduced by the Board at any time.
15. The power of addition and alteration of rules shall remain with the Board of Technical Education Rajasthan, Jodhpur.
16. In case of any dispute the jurisdiction will be courts situated at JODHPUR only.  
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## COMPUTER APPLICATIONS -I

### CODE TD 101

BC 101/CA 101/ CD 101/ ID 101

L	T	P
1	--	3

### RATIONALE

The course has been designed to provide an introduction to Computer Technology and its tools. The student will be able to understand the basics of Computer and its application. The student will be able to appreciate the role of Computer Technology, more specifically computer hardware, software and its application in the present social and economic scenario.

The course has focus on the following:

- \* Computer Organization.
- \* Computer Operating System and Software
- \* MS Windows, Word Processing
- \* Presentation Packages.

### CONTENTS

	L	P
<b>1. Computer Appreciation :</b>	<b>2</b>	<b>3</b>
1.1. Characteristics of Computers.		
1.2. Input, Output, Storage units.		
1.3. CPU, Computer System.		
<b>2. Computer Organization :</b>	<b>11</b>	<b>12</b>
2.1 Central Processing Unit.		
2.1.1 Control Unit.		
2.1.2 Arithmetic Unit.		
2.1.3 Instruction Set.		
2.1.4 Register.		
2.1.5 Processor Speed.		
2.2 Memory		
2.2.1 Main Memory.		
2.2.2 Storage Evaluation Criteria.		
2.2.3 Memory Organization.		
2.2.4 Memory Capacity.		
2.2.5 Random Access Memories.		
2.2.6 Read Only Memories.		
2.2.7 Secondary Storage Devices.		
2.2.7.1 Magnetic Disk.		
2.2.7.2 Floppy and Hard Disk.		

2.2.7.3	Optical Disks CD-ROM.		
2.2.7.4	Mass Storage Devices.		
2.3	<b>Input Devices</b>		
2.3.1	Keyboard.		
2.3.2	Mouse.		
2.3.3	Trackball.		
2.3.4	Joystick.		
2.3.5	Scanner.		
2.3.6	Optical Mark Reader.		
2.3.7	Bar-code Reader.		
2.3.8	Magnetic Ink Character Reader.		
2.3.9	Digitizer.		
2.3.10	Card Reader.		
2.3.11	Voice Recognition.		
2.3.12	Web Camera		
2.3.13	Video Cameras.		
2.4	<b>Output Devices</b>		
2.4.1	Monitors.		
2.4.2	Printers.		
	2.4.2.1 Dot Matrix Printers.		
	2.4.2.2 Inkjet Printers.		
	2.4.2.3 Laser Printers.		
2.4.3	Plotters.		
2.4.4	Computers Output Micro-Film (COM).		
2.4.5	Multimedia Projector		
2.5.	<b>Computer Software.</b>		
2.5.1	Relationship between Hardware and Software.		
2.5.2	System Software, Application Software, Compiler. Interpreter, Names of some high level languages		
2.5.3	Applications of Computer		
<b>3.</b>	<b>Operating System :</b>	<b>9</b>	<b>12</b>
3.1	Microsoft Windows		
3.1.1	An overview of different versions of Windows.		
3.1.2	Basic Windows elements.		
3.1.3	File Management through Windows.		
3.1.4	Using Essential Accessories: Systems Tools- Disk cleanup, Disk defragmenter, Entertainment, Games, Calculator, Imaging-Fax, Notepad, Paint, WordPad, Recycle Bin, Windows Explorer, Creating Folders & Icons		

<b>4.</b>	<b>Word Processing :</b>	<b>5</b>	<b>39</b>
4.1	Word Processing Concepts.		
4.2	Saving, Closing, Opening an Existing Document.		
4.3	Selecting text, Editing text.		
4.4	Finding and Replacing text.		
4.5	Printing Documents.		
4.6	Creating and Printing Merged Documents, Mail merge		
4.7	Character and Paragraph Formatting, Page Design and Layout.		
4.8	Editing and Proofing Tools; Checking and correcting spellings.		
4.9	Handling Graphics.		
4.10	Creating Tables and Charts.		
4.11	Document Templates and Wizards.		
<b>5.</b>	<b>Presentation Package :</b>	<b>3</b>	<b>24</b>
5.1	Creating. Opening and Saving presentations.		
5.2	Creating the look of presentation.		
5.3	Working in different Views, working with Slides.		
5.4	Adding and formatting Text, Formatting Paragraphs.		
5.5	Checking Spelling and Correcting Typing Mistakes.		
5.6	Making Notes, Pages and Handouts.		
5.7	Drawing and Working with Objects.		
5.8	Adding Clip Art and Other Pictures.		
5.9	Designing Slide Shows.		
5.10	Running and Controlling a Slide Show.		
5.11	Printing Presentations.		

**REFERENCE BOOKS :**

- |    |                                   |   |
|----|-----------------------------------|---|
| 1  | Foundations of Computing          | P.K. Sinha and P. Sinha, First edition, 2002 BPB publication. |
| 2. | Microsoft office 2000 for Windows | S. Sagman, second Indian print, 2001 Pearson education.       |

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## COMMUNICATION SKILLS IN ENGLISH

### CODE TD 102

BC 102/CA 102/ CD 102/ ID 102

<b>L</b>	<b>T</b>	<b>P</b>
1	-	2

### RATIONALE

The students seeking admission to the diploma courses do not have the required proficiency in English. It has, therefore, been decided to introduce English and Communication Techniques to help them to attain proficiency in the subject.

### CONTENTS

	<b>L</b>
1. Narration, Voice, Basic Sentence Patterns. (Nine basic sentence patterns)	5
2. Transformation of Sentences, Determiners, Preposition.	7
3. Tenses, Common errors (Noun, Pronoun, Articles, Adverb, Punctuation, Preposition etc.)	7
4. Modals in Conversational Usage, Prefix, Suffix, Idioms & Phrasal verbs :	4
<b>Modals</b>	
Can, Could, Should, Will, Would, May, Might, Must, Need not, Dare not, Ought to, Used to.	
<b>Phrases</b>	
At all; In stead of; In Spite of; As well as; Set up; Up set; Look up; Call off; Call out; Come across; Set right; Look other.	
<b>Idioms</b>	
Work up (excite); Break down; Stand up for; Turn down; Pass away; Pass on; Back up; Back out; Carry out; Done for (ruined); Bring about; Go through; Ran over; Look up (improve); Pick out (selected).	
5. Composition - 1. Unseen Passage, Precis Writing	2
6. Letter Writing, Paragraph Writing, Report Writing	3
7. Essay Writing - Essays on general and topics related to environmental problems.	2

## PRACTICALS

We envisage two successive stages for attaining skill in communication ability;

1. Listening
2. Speaking

We can club them together as shown above.

	<b>P</b>
<b>1. Listening :</b>	<b>6</b>
1.1 For improving listening skills the following steps are recommended,	
1.1.1 Listen to Prerecorded Tapes	
1.1.2 Reproduce Vocally what has been heard	
1.1.3 Reproduce in Written form	
1.1.4 Summarise the text heard	
1.1.5 Suggest Substitution of Words and Sentences	
1.1.6 Answer Questions related to the taped text	
1.1.7 Summarise in Writing	
<b>2. Speaking :</b>	<b>6</b>
2.1 Introducing English consonant-sounds and vowel-sounds.	
2.1.1 Remedial exercises where necessary	
2.2 Knowing Word stress	
Shifting word stress in poly-syllabic words	
[ For pronunciation practice read aloud a para or page regularly while others monitor]	
<b>3. Vocabulary :</b>	<b>10</b>
3.1 Synonyms. Homonyms. Antonyms and Homophones	
3.2 Words often confused, as for example,	
[I-me; your-yours; its-it's; comprehensible-comprehensive; complement-compliment]	
3.3 Context-based meanings of the words, for example,	
3.3.1 man[N] man[vb]; step[N] ,step[vb]	
3.3.2 conflict _____ Israel Palestinian conflict	
Emotional conflict,	
Ideas conflict	
3.3.3 learn _____ 1 learn at this school	
I learnt from the morning news	
<b>4. Delivering Short Discourses :</b>	<b>15</b>
4.1 About oneself	
4.2 Describing a Place, Person, Object	
4.3 Describing a Picture, Photo.	

- 5. Group Discussion : 15**  
 5.1 Developing skill to initiate a discussion [How to open]  
 5.2 Snatching initiative from others [Watch for weak points, etc.]

**6. Expand a topic-sentence into 4-5 sentence narrative. 8**  
**Note :**

1. The Medium of teaching and examination will be English.
2. The Question on Essay Writing (Unit-7) will be compulsory. The student will have to attempt one essay out of two, touching the given points on general/ local topic related to environmental problems.
3. At least one question will be set from each unit.
4. No theory question will be set from syllabus of practicals.

**REFERENCE BOOKS**

- |   |  |
|---|--|
| 1. Intermediate English Grammar                         | Raymond Murphy,<br>Pub: Foundation Books,<br>New Delhi |
| 2. Eng. Grammar, usage & Composition                    | Tickoo & Subramanian<br>Pub: S.Chand and Co.           |
| 3. Living Eng. Structure                                | Stannard Alien.<br>Pub: Longman                        |
| 4. A Practical Eng. Grammar<br>(and its Exercise Books) | Thomson and Martinet.<br>Pub : ELBS                    |
| 5. High School English Grammar<br>and Composition       | Wren & Martin.   |

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**INTRODUCTION TO TEXTILES**

**CODE TD 103**

**L T P**  
 3 -- 1

**RATIONALE**

This subject may be considered as the "backbone" for the students of Textile Design " Textile" is related with " Fibre" " Yarn" and Fabric" which may be taught to students through this subject. Apart from these constructive aspects, we also teach the students the different decorating techniques, thus after going through this subject the students may become capable in understanding all other textile related subjects.

**CONTENTS**

<b>1. Fibre :</b>		<b>L</b>
1.1	Definition of Fibre, Yarn, and Fabric.	
1.2	Classification of Fibers.	
1.3	General Characteristics / Properties of Fibers	
1.4	Study of Different Fibers in Context of the following:	
1.4.1	Sources and Production of Fibres.	
1.4.2	Characteristics / Properties of Fibres	
1.4.3	Uses of Different Fibers.	
1.4.4	Elementary knowledge of Blended Fibres.	
1.4.5	Identification of Textile Fibers.	
<b>2. Yarn :</b>		<b>18</b>
2.1	Elementary knowledge of Processing of Different Types of Fibres into Yarn :	
2.1.1	Cellulosic (Cotton )	
2.1.2	Protein (Silk and Wool)	
2.1.3	Synthetic ( Rayon, Poly- ester, Nylon and Acrylic).	
<b>3. Types of Yarn :</b>		<b>18</b>
3.1	Classification of Yarn	
3.2	Introduction to different types of Yarn	
3.2.1	Partially Oriented Yarn	
3.2.2	Standard Yarn.	
3.2.3	Bulk yarn	
3.2.4	Core yarn	
3.2.5	High Tenacity Yarn	
3.2.6	Lustre Yarn	
3.2.7	Carpet Yarn	
3.2.8	Stretch Yarn	
3.2.9	Twist and Twist Yarn	
3.2.10	Spiral Yarn	
3.2.11	Gaundrelle Yarn	
3.2.12	Hosiery Yarn etc.	
3.3	Characteristics of Yarn	
3.4	Twist	
3.5	Count Measuring Systems	



<b>4. Construction :</b>	<b>6</b>
4.1 Yarn Preparation for Fabric Construction	
4.2 Yarn Properties v/s Fabric properties and Impact of Fibre Properties on both.	
<b>5. Dyeing and Printing :</b>	<b>12</b>
5.1 Meaning of Dye, Dyeing and Printing difference between Dyeing and Printing	
5.2 General Theory of Dyeing Factor Affecting Dyeing take up.	
5.3 Classification of Different Printing Methods and Styles.	
<b>6. Finishes :</b>	<b>10</b>
6.1 Classification of different Finishes	
6.2 Need for Fabric Processing	
6.3 Detailed Study of the following Finishes, Brief Study of Related Equipments & Machines.	
6.3.1 Calendaring	
6.3.2 Tentering	
6.3.3 Bleaching	
6.3.4 Mercerising	
6.3.5 Carbonizing	
6.3.6 Fulling	
6.3.7 Shrinkage Control	
6.3.8 Water Repellent Finishes	
6.3.9 Moth and Mildew Proof Finishes	
<b>7. General Studies :</b>	<b>6</b>
7.1 Selection and Suitability of Fibre.	
7.2 Care of Fabrics and Stain Removal.	
7.3 General Importance of Textiles.	

**PRACTICALS**

	<b>P</b>
1. Physical and Chemical Identification of Different Type of Fibres	4
2. Qualitative and Quantitative Analysis of Fibres and their Blends.	3
3. Estimation of Fibre Diameter and Yarn Diameter by Projection Microscope	3

4. Microscopic study of Fibre Cross Section.	2
5. Identification of Different Types of Yarn.	3
6. Measurement of Yarn Count with the Help of Yarn Count Balance.	3
7. Preparation of a file containing all practical exercises done in the subject.	6
8. Market Survey	6

**REFERENCE BOOKS :**

1. Textiles Fibre to Fabric	Corbean
2. Textiles	Norma Hallen and Jane Sadler
3. Textile Fibres.	K.P. Hess.
4. Fundamental of Textiles and their Care.	Sushila Dhantiyagi
5. Textile Science	J.T. Marsh
6. Textile Science	Vilenski
7. Fibre and Fabrics of Today	Mark
8. Textile Products Selection Use and Care	Alexander
9. Textile Yarn Technology Structure and Appearance	J.C. Goswami J.G. Martindele, F.L. Scardina
10. Textiles	William Morris
11. The Standard Hand Book of Textiles	A.J.Hall
12. Textiles in Perspective	Era Block and Smith
13. Fibre and Fabric of Today	Hellon Thomson
14. From Fibres to Fabric	Elizabeth Crale.
15. Understanding Textiles.	Phyllip G.Tortora
16. Processing of Fibres in Yarn	V.Usenko
17. Textile Fibres	V.A.Shenai
18. Textile Fabrics and their Selection.	Sabel B.Wintate
19. Essentials of Textile	Marjory L.Jeseph.
20. Household Textiles and Laundry Work	Durga Dwelkar.
21. Chemical Technology of Fibrous Material.	Sadov.

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**STRUCTURAL FABRIC DESIGN -I**

<b>CODE TD 104</b>	<b>L</b>	<b>T</b>	<b>P</b>
	2	--	2

**RATIONALE**

Structural fabric design is one of the most important part of Textile design in which the students have to learn and create designs for different woven fabrics, By learning the basics of weaving, students become aware of techniques of fabric construction Actually the techniques of dyeing and printing are applied mainly on constructed fabrics, hence the students should be able to construct at least basic fabrics so that they become aware of the designing of these fabrics.

**CONTENTS**

	<b>L</b>
<b>1. Introduction to Fabric Structures :</b>	<b>2</b>
1.1 Woven Structures	
1.2 Knitted Structures	
1.3 Non-Woven Structures	
<b>2 Definition of :</b>	<b>2</b>
2.1 Warp and Weft	
2.2 Ends and Picks	
2.3 Design/Pattern	
2.4 Repeat of a Design	
2.5 Draft	
2.6 Peg Plan	
2.7 Dent-Plan	
<b>3. Study of Different Types of Drafts.</b>	<b>2</b>
<b>4. Study of Parts of a Handlooms.</b>	<b>2</b>
<b>5. Classification of Basic Weaves.</b>	<b>3</b>
<b>6. Plain Weave and it's Derivatives.</b>	<b>12</b>
<b>7. Twill Weave and it's Derivatives.</b>	<b>16</b>
<b>8. Calculation for Twill Angles.</b>	<b>3</b>
<b>9. Satin and Sateen and its Extension.</b>	<b>6</b>
<b>10. Ornamentation of Plain Fabric.</b>	<b>3</b>
<b>11. Simple Colour and Weave Effects.</b>	<b>6</b>
<b>12. Definitions of Different Type of Fabrics.</b>	<b>3</b>

**PRACTICALS**

	<b>P</b>
<b>1. Students shall prepare a Graph file of Different basic Weaves with Draft, Peg Plan and Dent Plan.</b>	<b>20</b>
<b>2. Students shall also prepare a file of sample collected from Market for the Weaves Studied.</b>	<b>20</b>
<b>3. Construction of following Articles on Sample Loom :</b>	<b>20</b>
3.1 Napkin By Combination of any two basic Weaves. Placement : Check/ Stripes Colour Scheme According to Placement	
3.2 Durry By Plain Weave Placement : Geometrical Design. Colour Scheme:- Warp in Single Colour. weft in minimum 3 colour.	

**REFERENCE BOOKS :**

1. Principles of Weaving	Mark Rebinson
2. Watson Textile Design and Colour	Z.Gresicki
3. Textiles Fibre to Fabris Beanared	P.Corbmav
4. Under Standing Textiles.	G.Tortora.
5. Handloom Weaving Technology	Allen A. Fannin.

\* \* \* \* \*

**COLOUR & CREATION**

<b>CODE TD 105</b>	<b>L</b>	<b>T</b>	<b>P</b>
	1	--	4

**RATIONALE**

To enhance the beauty of design, colour plays a very significant role in the expression of one design. Different colour schemes provide different feeling and this impart a sense of enrichment to the design. " As the cloth is required to man, colour in required to design", this thinking itself clarifies that there is no use of textile design without adding colours. Thus the aim of this subject is to develop colour sense in the students by imparting them theoretical as well as practical knowledge about colours.

**CONTENTS**

	<b>L</b>
<b>1. Colour :</b>	<b>10</b>
1.1 Meaning of Colour and Colour Ways.	
1.2 Classification of Colour Theories:	
1.2.1 Light Theory of Colour.	
1.2.2 Pigment Theory of Colour.	
1.3 Colour Terminology :	
1.3.1 Hue, Chroma, Value	
1.3.2 Tones (Tints and Shades) Light and Colour Phenomena and the Physical basis of Colour.	
<b>2. Detailed Study of Colour Theories in Context of the following :</b>	<b>12</b>
2.1 Chromatic Circle.	
2.1.1 Primary Colours.	
2.1.2 Secondary Colours.	
2.1.3 Complementary.	
2.1.4 Split Colours.	
2.1.5 Double Split Colours.	
2.1.6 Tertiary Colours.	
2.1.7 Triad Colours.	
2.1.8 Warm and Cool Colours.	
2.2 Neutral Colours.	
2.3 Colour-Schemes (Colour in Combination).	
2.3.1 Monochromatic, Polychromatic and Achromatic.	
2.3.2 Analogue and Contrast :	
2.3.2.1 Simultaneous	
2.3.2.2 Successive.	
2.3.3 Cool and Warm.	
2.3.4 Complementary.	
<b>3. Colour (Contd.) :</b>	<b>8</b>
3.1 Attributes of the Primary and Secondary Colours.	
3.2 Broken Hues	
3.3 Colour Measurement.	
3.4 Effect of Colour :	
3.4.1 Receding	
3.4.2 Advancing	
3.5 Methods of Modification of Colours.	

**PRACTICALS**

	<b>P</b>
<b>1. Chromatic Circle Showing Different Colour.</b>	<b>12</b>
<b>2. Preparation of Sheets for each Colour Scheme Mentioned in Theory.</b>	<b>28</b>
<b>3. Preparation of a Colour Chart Showing all possible Tints and Shades.</b>	<b>20</b>
<b>4. Exercises on Study of Fabric Sample Pieces :</b>	<b>60</b>
4.1 Fabric Study Includes Imitation means as it is copy of Design and Colour Schemes given in the Sample.	
4.2 Preparation of at Least 12 Different Colour ways for 2 Sample studied, based on Variation in Hue, Chroma, and Value.	
4.3 Composition of three Sample Textile. Design by Sreation and Preparation of 12 Colour ways based on Variation in Hue, Chroma and Value.	

**REFERENCE BOOKS :**

- |  |  |
|--|--|
| 1. Colour Source Book for Graphic Designers. | Sadao Nokamnar<br>Pub : Jupur Books House,<br>Bombay |
| 2. Designer : Guide to Colour                | Sadao Nokamnar                                       |
| 3. Colour Harmony                            | Hideaki chijiwa                                      |
| 4. Colour Trends in Two Volume.              | Products Ltd.  |
| 5. Watson's Textile Design and Colour.       | Z. Gresicki  |
| 6. Textile Science.                          | Vilenski   |
| 7. Rooprad Kala ke Mooladhar                 | Sharma/Agarwal.                                      |

\* \* \* \* \*

**INTRODUCTION TO TEXTILE ART & CRAFT – I**  
**CODE TD 106**

**L T P**  
-- -- 5

**RATIONALE**

Indian art and craft are well known to the world, specially the textile related arts are of world fame, hence the students of Textile Design should be well aware about this rich heritage. The ultimate aim of this subject is to impart essential knowledge to the students regarding important aspects of art so that they may utilize these arts for their creative thinking of designing and may enrich their designing with the help of these arts.

**CONTENTS**

<b>1. Study of Indian Crafts and Art Related to Textiles with Reference to :</b>	
1.1 Historical Significance	
1.2 Centres of Production	
1.3 Salient Features	
1.4 Present Significance	
<b>2. Study of Various Types and Methods of Batik with Reference to Different Countries</b>	
<b>3. Detailed Study of the Techniques Related to :</b>	
3.1 Paper Stencils	
3.2 Plastic Stencils	
3.3 Metal Stencils	
<b>4. Study of the following :</b>	
4.1 Phulkari	
4.2 Kashmiri	
4.3 Bengal kantha	
4.4 Chicken	
4.5 Kutch	
<b>5. Study of Varli &amp; Mandana Folk Arts.</b>	
<b>PRACTICALS</b>	
	<b>P</b>
<b>1. Art of Batik :</b>	<b>40</b>
1.1 Preparation of a file with Batik samples by various methods on the following surfaces :	
1.1 Paper	
1.2 Leather	
1.3 Fabric-cotton and silk.	
1.2 Preparation of a wall Hanging Dupatta/ Scarf/ Gents shirt by any of Batik techniques.	
<b>2. Stencil Craft :</b>	<b>30</b>
2.1 Preparation of a file by paper stencil method on different fabrics with different designs and colours	
2.2 Prepare, Table mates Napkins set, Jute bag.	
2.3 Prepare file cover, Letter pads, Envelops	
<b>3. Embroidery Technique :</b>	<b>50</b>
3.1 Preparation of a sample file with the following	
3.1.1 Phulkari	
3.1.2 Kashmiri	
3.1.3 Bengal kantha embroideries	

3.1.4 Chicken	
3.1.5 Kutch	
3.2 Preparations of yoke/ Blouse with any of the above mentioned embroideries.	
<b>4. Varli / Mandana Painting.</b>	<b>30</b>
<b>Note : The Essential theory should be taught during the practicals.</b>	

**REFERENCE BOOKS :**

1 Batik Art	Sarla Sudersan
2 Masterpieces of Indian Textiles	Rustam J.Metha
3 Indian Embroidery	Kamladevi Chatopadhy
4 Textiles of India	V.A. Shenai
5 Traditional Indian Textiles	Colilloeri John
6 Craft traditions of India	Joya Jaithely
7 Indian Embroidery	John Traviu
8 Embroidery A complete course in Embroidery design and technique	Brover
9 A Catalogue on Phulkari Textiles in the Indian Museum.	Devyani mitra Dutt
10 Indian Crafts	D.N. Saraj.
11 Ideas and Techniques for Fabric Design.	Lynda flower
12 Textiles of the Art and Craft Movement.	Lynda flower
13 Indian Embroidery.	John Irawin and Margwel Hall.
14 The Romance of Indian Embroidery	Dengeakery Kamala's
15 Kantha Journal of Indian Society of Oriental Art.	Kramrisch Dr. Stella
16. Varli	K prakash
17. Mandana	K prakash

\* \* \* \* \*

## SKETCHING AND DRAWING

CODE TD 107

L	T	P
--	--	6

### RATIONALE

"Sketching" and "Drawing" are the languages of art. The translation of ideas into practice with the use of this Graphic language is really beyond imagination. If one can sketch and draw the different objects freely, one can be capable in translating his/her imagination on paper. The ultimate aim of this subject is to teach the student the basics of sketching and drawing with different mediums so that they may become able to handle each and every medium for their designing.

### CONTENTS

1. Meaning and difference between Sketching and Drawing.
2. How to Sketch and Draw :
3. Special Emphasis on Perspective

### PRACTICALS

- |   | <b>P</b>  |
|---|-----------|
| <b>1. Nature Study :</b>  | <b>60</b> |
| Sketching and Drawing of the following from different Angles.                   |           |
| 1.1 Flowers   |           |
| 1.2 Leaves.   |           |
| 1.3 Stems.  |           |
| 1.4 Fruits.   |           |
| 1.5 Vegetables.   |           |
| 1.6 Trees.  |           |
| 1.7 Birds.  |           |
| 1.8 Butterflies   |           |
| 1.9 Land Scapes   |           |
| 1.10 Creepers   |           |
| <br>  |           |
| <b>2. Object Study :</b>  | <b>36</b> |
| 2.1 Understanding of basic Geometrical Shapes in Perspective.                   |           |
| 2.2 Expression of Opaque and Transparent Objects.                               |           |
| 2.3 Expression of Rough and Glazed Surface Objects.                             |           |
| 2.4 Study of Drapery.   |           |
| <br>  |           |
| <b>3. Conversion of already drawn form in to Geometrical or abstract forms.</b> | <b>18</b> |
| <br>  |           |
| <b>4. Compositions :</b>  | <b>36</b> |
| 4.1 Composition of realistic forms with   |           |

- 4.2 Water Colour on 1/4imp. Sheet.  
Composition of converted with Poster Colours on 1/4imp sheet.

- NOTE : 1.** A Sketch file for first three exercises shall be maintained by students having 3 drawing of each topic with at least 3 different angles using. Pencil, Pen and Ink and Water Colours.
- 2.** The Essential theory should be taught during the practicals.

### REFERENCE BOOKS :

- |   |                      |
|---|----------------------|
| 1 How to Draw and Point   | Wedd.                |
| 2 How to Draw   | Fester series        |
| 3 Its Fun to Sketch with Pencil and Crayons.                            | Thompson             |
| 4 Plant Life  | Piccola.             |
| 5 Paradise as a Garden  | Moynihau             |
| 6 The Illustrated Book a Trees.   | Nicholsau Clapharu   |
| 7 Trees   | Garner and Fredvick  |
| 8 Reses in Colours  | Edland               |
| 9 Focus on Nature   | Faher                |
| 10 The Living World   | St. Michael          |
| 11 Garden Plants  | Michael Wright       |
| 12 The Animal kingdom   | Cavendish            |
| 13 Wild Life the Beauty of Animal                                       | Bellanry             |
| 14 Learn to Point Wildlife  | Martiu Kuowelding    |
| 15 Birds  | Hunt, Lynn and Bogue |
| 16 The Thomson and Hudson manual of Rendering with Pen and Ink 17 Birds | Gills and Robert     |
| 17 How to Draw and Point Landscape                                      | Fester Series        |
| 18 How to Draw Human Figures  | Fester Series        |
| 19 Still Life   | Fester Series        |
| 20 Trees in Perspective   | Fester Series        |
| 21 Water Colour and Pointing  | Ron Rauson.          |

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## BASICS OF DESIGNING

CODE TD 108

L	T	P
--	--	5

### RATIONALE

"Designing" is an art created by men with certain limitations. There are some definite principles through which one can learn art with more depth and detail. The aim of this subject is to teach all the basics related to designing including tools, materials and their application. By learning this subject, students may express themselves and their feelings on different surfaces by different medias and if once student become able to express oneself, we reach near to our goal.

### CONTENTS

1. Introduction to Art Materials and Tools.
2. Elements and Principles of Drawing and Composition.
3. Dots and Lines Theory :-  
Formation of Various Type of Lines. Different Suitable Materials.
4. Understanding of Basic Shapes.
5. Understanding of Space Organization:-
6. Colour, Tone, Negative and Positive Space, and Textures.
7. Collage :- It's Importance in Forming a Design
8. Concept of Illusion in Art Expression :- Three Dimensional Effect.
9. Expression of Technical Terms used in Textile Design
10. Enlargement and Reduction of Designs.
11. Understanding of Various Styles of Design
  - 11.1 Geometrical
  - 11.2 Floral.
  - 11.3 Traditional
  - 11.4 Folk
  - 11.5 Realistic
  - 11.6 Symbolic
  - 11.7 Abstract
  - 11.8 Conventional
  - 11.9 Modern.
12. Construction and Placement of Design to form Pattern :
  - 12.1 Drop 1/4drop,1/2drop,3/4drop
  - 12.2 Drop Reverse
  - 12.3 Unit Repeat.
  - 12.4 Sateen Basis.

- 12.5 Diamond.
- 12.6 Rectangular.
- 12.7 Ozee.

### PRACTICALS

- |    |   | P  |
|----|---|----|
| 1. | <b>Simple Exercises for Handling T square, Set Square, Liner Compass, Crockel Pen etc.</b>                                    | 5  |
| 2. | <b>Work in all Type of Lines using Soft Pencils and Ink.</b>  | 5  |
| 3. | <b>Drawing of all basic Shapes on :</b>   |    |
|    | 3.1 Medias :  |    |
|    | 3.1.1 Pencils :Different Type of Pencil with Tonal Effects  |    |
|    | 3.1.2 Coloured Ink.   |    |
|    | 3.1.3 Crayone   |    |
|    | 3.1.4 Poster Colours.   |    |
|    | 3.1.5 Water Colours.  |    |
|    | 3.1.6 Oil Colours.  |    |
|    | 3.1.7 Charcoal  |    |
|    | 3.2 Material :  |    |
|    | 3.2.1 Cartridge Sheet.  |    |
|    | 3.2.2 Ivory Sheet.  |    |
|    | 3.2.3 Handmade Sheet.   |    |
|    | 3.2.4 Mount Board.  |    |
|    | 3.2.5 Canvas  |    |
| 4. | <b>Composition of Geometrical Shapes with the help of Poster Colours.</b>   | 20 |
| 5. | <b>Preparation of Ten Greeting Cards using Different Textures on Different Type of Papers.</b>                                | 30 |
| 6. | <b>Forming a Coloured Picture Composition on a given theme, for example Composition of Animals, Flowers, Butterflies etc.</b> | 30 |
| 7. | <b>Forming a Composition of objects having three Dimensional effect.</b>  | 10 |
| 8. | <b>Preparation of two Textile Designs, one Modern and one Traditional with Enlarged and Reduced Version.</b>                  | 30 |
| 9. | <b>Collage.</b>   | 20 |

**Note : The Essential theory should be taught during the practicals.**

**REFERENCE BOOKS :**

- |                               |                   |
|-------------------------------|-------------------|
| 1. Rooprad Art Mooladhar      | Sharma & Agarwal  |
| 2. Repeat Pattern             | Phillips & Peter. |
| 3. Abstract and Floral Design | E.A. Seguy.       |
| 4. Encyclopedia of Textiles.  |                   |

\* \* \* \* \*

**COMPUTER APPLICATION - II**

<b>CODE TD 201</b>	<b>L</b>	<b>T</b>	<b>P</b>
BC 201/CA 201/CD 201/ID 201	1	--	3

**RATIONAL**

The course has been designed to provide an introduction to Computer Networks, Internet and Internet Accesses, Electronic mailing system, Worksheets concepts, Branch related software application. The student will understand the basic Web terminology. The students will be able to access Internet, send & receive emails, searching and managing data on worksheet.

**CONTENTS**

	<b>L</b>	<b>P</b>
<b>1. Branch Related Applications and Softwares :</b>	<b>5</b>	<b>15</b>
1.1 Only for Costume Design & Dress Making Students		
• Corel Draw / Photoshop		
1.2 Only for Textile Design Students		
• Corel Draw / Photoshop		
1.3 Only for Commercial Art Students		
• Corel Draw / Photoshop		
1.4 Only for Beauty Culture Students		
• Cosmopolitan/ Photoshop		
1.5 Only for Interior Decoration Students		
• 3D- Home / Autocad		
<b>2. Computer Networking :</b>	<b>4</b>	<b>8</b>
2.1 Need of networks.		
2.2 Types of Network-LAN, WAN, MAN etc.,		
2.3 Topologies of LAN - Ring, Bus, Star, Mesh and Tree topologies,		
2.4 Components of LAN -Media, NIC, NOS, Bridges, HUB, Routers, Repeater and Gateways,		
2.5 Modem - Working and characteristics,		
2.6 Types of Connections - Dialup, Leased Lines, ISDN,		
<b>3. Internet Basic :</b>	<b>5</b>	<b>15</b>
3.1 Evolution.		
3.2 Protocols.		
3.3 Interface Concepts.		
3.4 Internet Vs Intranet.		
3.5 Growth of Internet.		
3.6 Internet Service Provider.		
3.7 URLs and Domain names.		
3.8 Portals and Applications.		

<b>4.</b>	<b>Electronic Mail (E-mail) :</b>	<b>5</b>	<b>20</b>
4.1	Concepts		
4.2	POP and WEB Based E-mail		
4.3	Merits.		
4.4	Address.		
4.5	Basics of Sending & Receiving.		
4.6	E-mail Protocols.		
4.7	Mailing List.		
4.8	Free Email services.		
<b>5.</b>	<b>World Wide Web (WWW) :</b>	<b>4</b>	<b>14</b>
5.1	History and Working.		
5.2	Web Browsers, and Its functions.		
5.3	Concept of Search Engines.		
5.4	Searching the Web.		
5.5	Web Servers.		
5.6	Web Protocols.		
<b>6.</b>	<b>Spreadsheet Package :</b>	<b>7</b>	<b>18</b>
6.1	Spreadsheet Concepts.		
6.2	Creating, Saving and Editing a Workbook.		
6.3	Inserting, Deleting Work Sheets.		
6.4	Entering data in a cell / formula.		
6.5	Copying and Moving data from selected cells.		
6.6	Handling operators in formulas.		
6.7	Functions; Mathematical, Logical, Statistical Text, Financial. Date and Time Functions, using Function Wizard.		
6.8	Formatting a Worksheet: Formatting cells changing data alignment, changing date, number, character, or currency format, changing font, adding borders and colors.		
6.9	Printing worksheet.		
6.10	Charts and Graphs- Creating, Previewing, Modifying Charts.		
6.11	Integrating word processor, spread sheets, web pages.		

**NOTE:**

- Above concept may be illustrated using internet. Student should practice on internet for needful searching, text & voice chatting etc. Student are required to practice on MS-Excel and branch related software's.

- From topic no.1 "Branch Related Applications & Software" No question will be asked in theory paper. The Questions from this topic will be incorporated in practical examinations of respective branches.

**REFERENCE BOOKS :**

- |   |  |
|---|--|
| 1. O level Module -M 1.2- Internet & web page designing   | V.K.Jain,<br>BPB Publications.                       |
| 2. Internet for Everyone & Mat hews Lean,                 | Alexis Lean<br>Vikas Publishing<br>House, New Delhi. |
| 3. Microsoft office 2000 for Windows<br>Pearson education | S. Sagman  |

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**ENVIRONMENTAL STUDIES****CODE TD 202**

BC 202/CA 202/ CD 202/ ID 202

**L T P**

2 -- 2/2

**RATIONALE**

Environmental study is a subject as per directions of Supreme Court / Govt. of India. Under Act. 51 A (g) of our constitution it is our fundamental duty to protect our environment.

A diploma holder must have knowledge of different types of pollution so that she may help in balancing the eco system and controlling pollution by pollution control measures. She should also be aware of environmental laws related to the control of pollution.

**CONTENTS**

<b>1. General :</b>	<b>L</b>
	<b>5</b>
1.1 Biotic and abiotic environment.	
1.2 Adverse effects of Environmental Pollution	
1.3 Control strategies	
1.4 Various Acts and Regulations	
<b>2. Water Pollution :</b>	<b>10</b>
2.1 Water Quality Standards	
2.2 Surface and underground water sources	
2.3 Impurities in water and their removal	
2.4 De-fluoridation	
2.5 Adverse effects of domestic waste water and industrial effluent to surface water sources	
2.6 Eutrophication of lakes	
2.7 Self purification of streams	



<b>3.</b>	<b>Air Pollution :</b>	<b>10</b>
3.1	Sources of air contaminants	
3.2	Adverse effects on human health	
3.3	Measurement of air quality standards and their permissible limits	
3.4	Measures to check air pollution	
3.5	Greenhouse effect	
3.6	Global warming	
3.7	Acid rain	
3.8	Ozone depletion	
<b>4.</b>	<b>Solid Waste Management :</b>	<b>5</b>
4.1	Introduction to solid waste	
4.2	Its collection and disposal	
4.3	Recovery of resources	
4.4	Sanitary land-filling	
4.5	Vermi-composting	
4.6	Hazardous waste management	
<b>5.</b>	<b>Land Pollution :</b>	<b>5</b>
5.1	Soil conservation	
5.2	Land erosion	
5.3	Afforestation	
<b>6.</b>	<b>Ecology :</b>	<b>5</b>
6.1	Basics of species	
6.2	Biodiversity	
6.3	Population dynamics	
6.4	Energy flow	
6.5	Ecosystems	
<b>7.</b>	<b>Social Issues and the Environment :</b>	<b>5</b>
7.1	Sustainable development and Life style	
7.2	Urban problems related to energy	
7.3	Resettlement and rehabilitation of people	
7.4	Environmental ethics	
7.5	Consumerism and waste products	
<b>8.</b>	<b>Water Harvesting and Rural Sanitation :</b>	<b>10</b>
8.1	Water harvesting techniques	
8.2	Different schemes of Rural Water Supply in Rajasthan	
8.3	Rural Sanitation	
8.4	Septic Tank	

8.5	Collection and disposal of wastes	
8.6	Bio-gas	
8.7	Community Awareness and participation	
<b>9.</b>	<b>Miscellaneous :</b>	<b>5</b>
9.1	Non-Conventional (Renewable) sources of energy	
9.2	Solar energy, Wind energy, Bio-mass energy, Hydrogen energy	

<b>Practical work :</b>	<b>P</b>
1. Visit to local air polluted site	6
2. Visit to local water polluted site	6
3. Visit to local area to document environmental assets-mountain / desert / river / forest	6
4. Study of local birds, plants, insects	3
5. Plantation work	3
6. Environmental awareness campaign through exhibitions	6

**Note : After visits/ study, the students will prepare posters , charts , reports for exhibitions / presentations.**

#### REFERENCE BOOKS :

- |  |  |
|--|--|
| 1. Patyavaran Shiksha                                      | Dr. A.N. Mathur, Dr. N.S. Rathore & Dr. V.K. Vijay |
| 2. Patyavaran Adhyayan                                     | Dr. Ram Kumar Gujar<br>Dr. B.C. Jat                |
| 3. Patyavaran Avabodh                                      | Dr. D.D. Ojha                                      |
| 4. Environmental chemistry and pollution control :         | S.S. Dora  |
| 5. Ecology concepts and application :                      | Manuel C. Muller                                   |
| 6. Environmental protection                                | Emil T. Chanlett                                   |
| 7. Environmental science                                   | Cumingham. Saigo                                   |
| 8. Solid waste management :                                | C.I.. Mantell                                      |
| 9. Introduction to Environmental Engineering & Science     | Gilbert M Masters<br>Prentice Hall of India, 1995  |
| 10. Concept of Ecology, 1991                               | Edward J Kormondy                                  |
| 11. Ecology 1975   | Odum   |
| 12. Environmental Engineering                              | Peavy, Rowe, Tehobaniglum                          |
| 13. Environmental Impact Assessment                        | Mc Graw Hill, NewYork, 1977                        |
| 14. Environmental Technologies for Sustainable Development | Dr. Upendra Pandel<br>Dr. M.P. Poonia              |
| 15. Environmental Pollution & Management                   | V.K. Kohli & Vikas Kohli                           |

16. पर्यावरण विनाश के कगार पर राजीव गुप्ता  
 17. पर्यावरण जीवों का आंगन प्रेमानन्द चंदोला  
 18. पर्यावरण (त्रैमासिक) पर्यावरण एवं वन मंत्रालय, नई दिल्ली  
 19. Panda, New letter WWF-India, New Delhi

Recommended faculty for teaching the subject: Faculty of Civil Engineering or M.Sc. in Environment or PG Diploma in Environment and Sustainable Development.

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### DYEING AND PRINTING - I

CODE TD 203

L T P  
2 -- 3

#### RATIONALE

Dyeing and printing are co-related fields through which one can decorate the fabric well. Colours play the very significant role in fabric decoration. It creates the nature, it expresses the feeling and it says something.

Thus by the methods of dyeing and printing, Textile Design students can impart colour to the fabric and create aesthetic sense, Students learn theory & practice of dyes, their application and uses in context of different fabrics. Thorough knowledge of this subject will make the students capable to work in the field of dyes.

#### CONTENTS

	L
1. History of Dyeing and Printing in India.	3
2. Classification of Dyes	2
3. Pretreatments for different Fabrics before Dyeing and Printing.	13
4. Dyeing and Printing Auxiliaries	5
5. Detailed Study of all Type of Natural & Synthetic Dyes and difference between Dye and Pigment	15
6. Detailed study of Block Printing methods.	2
7. Preparation of Printing Paste for different Fabrics with different Dyes.	10
8. After Treatments for Fabrics Dyed and Printed with different Dyes.	5
9. Elementary knowledge of related m/c used in pretreatment, after Treatment and Dyeing.	5

### PRACTICALS

	P
<b>1. Students shall prepare a file containing the following exercises :</b>	<b>51</b>
1.1 Samples of different fabric pre-treated before dyeing and printing.	
1.2 Samples of different fabric dyeing with different dyes.	
1.3 Samples of Block printing with different dyes on different fabrics.	
<b>2. Preparation of shade – cards for various dyes.</b>	<b>6</b>
<b>3. Printing of the following articles :</b>	<b>33</b>
3.1 Cushion cover/sofa backs of printing.	
3.2 Table Cover/dress material. Printing with Blocks by discharge styles for printing.	

#### REFERENCE BOOKS :

1. Textile Science	Vilenski
2. Chemistry of Textile Auxiliaries	Shenai
3. Cotton Piece Dyeing	Gokhale and Shah
4. Chemistry of Dyes and Principle of Dyeing	Shenai
5. Technology of Dyeing	Shenai
6. Technology of Printing	Shenai
7. The Alternative Printing Handbook.	Chris Treweek and Zeitly
8. Block Printing on Textiles	Crikson
9. Study of Contemporary Textiles Craft of India Block Ptg.	Bijoy Chandra Mohanti & Jagdish Prasad
10. Thomas and Hudson manual of Textile printing.	
11. Textile printing.	Joyce storey
12. Textile printing.	Tim mara
13. Dictionary of Dyes and Dyeing	K.G. Ponting
14. Dyeing and Chemical Technology of Textile Fibres.	Tertman Grittin
15. An Introduction of Textile Printing.	Clarke.
16. Handbook of Textile Fibres, Dyes and Finishes.	Needles.
17. Textile Science	J.T. Marsh.
18. A Dictionary of Dyes and Dyeing	Bell and Hyman
19. A Dictionary of Dyes and Dyeing	Gooch.
20. A Glimpse on Chemical Technology of Textile Fibres.	R.P.Chakraverty
21. The History of Indian Dyeing	Anonyms

22	Block Printing from India for Textiles.	Levis A.B.
23	Standard Methods for the Determination of Colour Fastness of Textiles and Leather	Mahajan Brothers, Bombay.
24	Colour Index.	Mahajan Brothers, Bombay.
25	वस्त्र रंगाई तकनीक	शर्मिला गुर्जर, राजस्थान हिन्दी ग्रन्थ अकादमी, जयपुर

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**STRUCTURAL FABRIC DESIGN -II**

<b>CODE TD 204</b>	<b>L T P</b>
	2 -- 2

**RATIONALE**

After imparting the basic, knowledge of fabric construction and designing in 1st year, we must teach the students more elaborate and more intricate designing for the proper and wide growth of their ideas for fabric construction with practical applicability of these designs.

This subject is restricted to the loom and m/c's available but field visits and trainings may be arranged for non-available m/c's. Thus through this subject weaving ideas are woven in the form of fabric.

**CONTENTS**

<b>1.</b>	<b>Brief Study of Semi-Automatic &amp; Automatic Shuttleless Loom.</b>	<b>L</b>
		<b>4</b>
<b>2.</b>	<b>Fancy Twills :</b>	<b>10</b>
	2.1 Large Diagonals.	
	2.2 Shaded Twills.	
	2.3 Figured Twills.	
	2.4 Diagonals on Sateen Base.	
<b>3.</b>	<b>Diamond and Diaper Designs.</b>	<b>8</b>
<b>4.</b>	<b>Special Rib and Cord Structures.</b>	<b>4</b>
<b>5.</b>	<b>Miscellaneous Structures :</b>	<b>10</b>
	5.1 Crepe Weaves	
	5.2 Honeycomb Weaves.	
	5.3 Mockleno Weaves.	
	5.4 Huck a Back Weaves.	
<b>6.</b>	<b>Stripe and Check Weave Combinations.</b>	<b>8</b>
<b>7.</b>	<b>Fabric Analysis :</b>	<b>8</b>
	7.1 Objects and Methods	

7.2	Particulars to be Analysed.	
7.3	Identifying Warp and Weft.	
<b>8.</b>	<b>Calculations in Context to :</b>	<b>8</b>
	8.1 Warp and Weft.	
	8.2 Heald	
	8.3 Reed	
	8.4 Piece Weight Calculations.	
	8.5 Cloth Costing and Cover Factor	

**PRACTICALS**

<b>1.</b>	<b>Students shall Prepare a Graph File of Weaves with Draft, Peg Plan and Dent Plan.</b>	<b>P</b>
		<b>18</b>
<b>2.</b>	<b>Preparation of File as per the Market According to the Following :-</b>	<b>16</b>
	2.1 Fabrics Made by :	
	2.1.1 Vegetable Fibers	
	2.1.2 Animal Fibers	
	2.1.3 Man Made Fibers	
	2.1.4 Blended Fibers	
	2.2 Manufacturing and Decorating :	
	2.2.1 Printed	
	2.2.2 Knitted	
	2.2.3 Woven	
<b>3.</b>	<b>Estimation of Data for Cloth Reproduction.</b>	<b>6</b>
<b>4.</b>	<b>Construction on loom :</b>	<b>20</b>
	4.1 Shirting - Based on Basic Weaves	
	4.2 Towel Huck a Back / Honeycomb	

**REFERENCE BOOKS :**

1	Watson's Textile Design and Colour	Z. Greskchi
2	Weaving Calculations	Sen / Gupta
3	Essential Calculations of Practical Cotton Spinning	T.K. Pattabhivam
4	Modern Developments in Weaving	Ray and Morten.

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## INDIAN TRADITIONAL TEXTILES

<b>CODE TD 205</b>	<b>L T P</b>
	1 -- 4

### RATIONALE

"Tradition" is what going on since long. Traditional textiles in fact create a ground for current textiles. With time, taste and liking changes that make influence on designs and usually the changed aspects of a design are something used on traditions.

India has been so rich in traditional textiles that even today we find impact of these textiles not only in our home market but also in the world market. Still traditional textiles of India are world fame, having a large export market, hence the students must be aware of traditional textiles.

### CONTENTS

		<b>L</b>
<b>1.</b>	<b>Study of Indian Traditional Textiles with reference to :</b>	<b>26</b>
1.1	Historical Significance	
1.2	Construction Techniques	
1.3	Styles	
1.4	Colours and Motifs	
1.5	Centers of Production	
1.6	Present Significance Textiles should be studied :	
1.6.1	Woven	
1.6.1.1	Brocade	
1.6.1.2	Tanchui	
1.6.1.3	Kanchipuram	
1.6.1.4	Jamdani	
1.6.1.5	Chanderi	
1.6.1.6	Maheshwari	
1.6.1.7	Baluchar	
1.6.1.8	Kullu shawls	
1.6.1.9	Kashmiri	
1.6.1.10	Carpet	
1.6.2	Dyed, Printed and Painted :	
1.6.2.1	Sanganari	
1.6.2.2	Kalamkari	
1.6.2.3	Ikat	
1.6.2.4	Bandhani	
1.6.2.5	Miniatures	
<b>2.</b>	<b>State-Wise Names of Different Traditional Textiles of India.</b>	<b>4</b>

## PRACTICALS

		<b>P</b>
<b>1.</b>	<b>Students shall prepare a sample file by collecting 5 motifs of each topic mentioned in theory.</b>	
<b>2.</b>	<b>Suggested Exercises :</b>	
2.1	Brocade Border all Over	<b>12</b>
2.2	Tanchui Border all Over	<b>12</b>
2.3	Kanchipuram Pallu and all Over	<b>8</b>
2.4	Jamdani all Over	<b>8</b>
2.5	Baluchar Pallu	<b>10</b>
2.6	Chanderi Pallu and all Over	<b>8</b>
2.7	Maheshwari Pallu and all Over	<b>8</b>
2.8	Carpet Border and all Over	<b>10</b>
2.9	Sanganari, Border and all Over	<b>10</b>
2.10	Patola Border and all Over	<b>10</b>
2.11	Kalamkari Painting on Fabric	<b>12</b>
2.12	Miniature Painting on Fabric	<b>12</b>

### REFERENCE BOOKS :

1	Hand Woven Fabrics of India	Dhamija / Jain
2	Indian Crafts	D.N. Saraf
3	Ikat Techniques of India	Chetna Desai
4	Traditional Indian Textiles	Gillow John.
5	Masterpieces of Indian Textiles	Rustam J. Metha
6	Brocades of Ahmedabad	Jhala, Uma De.
7	Rugs and Carpets of the World	Bennett
8	South Indian Traditions of Kalamkari	Lolika varadrajew
9	Costumes and Textiles of India	Brij Bhushan
10	Miniature Painted Techniques	Sumo Hendra
11	Indian Printed Textiles	Jaer Pupul
12	Kashmiri and its Shawls	Anonymous
13	The Textile Industries of Kashmir	Barker A.F.
14	Indian Textiles	Irwin John.

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## INTRODUCTION TO TEXTILE ART AND CRAFT - II

<b>CODE TD 206</b>	<b>L T P</b>
	-- -- 4

### RATIONALE

The development of textile art & craft has a long history. With time, it has grown gradually and today "Textile art" stands strongly in the field of textiles. It had it's importance in ancient artistic world which may

be clarified by studying caves and costumes of historic times.

Present artistic world has started imparting it as important aspect of textiles. After teaching some textile art and craft in 1<sup>st</sup> yr. we teach here some other arts like tie and dye, appliqué and patch, pattern making, designing and folk art of Madhubani for their perfection.

### CONTENTS

1. **Tie and Dye :**  
Detailed Study in Reference to
  - 1.1 Historical Significance
  - 1.2 Construction Techniques
  - 1.3 Styles
  - 1.4 Colour and Motifs
  - 1.5 Centres of Production
  - 1.6 Present Significances
2. **Applique and Patch work :**  
Detailed Study in Reference to
  - 2.1 Historical Significance
  - 2.2 Construction Techniques
  - 2.3 Styles
  - 2.4 Colour and Motifs.
  - 2.5 Centers of Production
  - 2.6 Present Significances.
3. **Drafting and Pattern Making :**  
Detailed Description with Drafts of following
  - 3.1 Baby Frock.
  - 3.2 Skirt
  - 3.3 Salwar Kurta
  - 3.4 Blouse

Basic Body Blocks for all the Topics Mentioned.
4. **Folk Art :**  
Detailed study of Madhubani Paintings & Phar Painting.

### PRACTICALS

1. **Students shall prepare a Sample File with Salient Features of the following :** **P**  
**24**
  - 1.1 Samples of Tie and Dye. with Different Techniques.
  - 1.2 Samples of Appliqué and Patch Work.
2. **Articles :** **38**
  - 2.1 Sari / Single Bed Sheet by Tie and Dye Technique
  - 2.2 Skirt/ Cushion Cover by Applique Technique.

3. **Pattern Making & Designing for the Following Articles :** **20**
  - 3.1 Baby Frock.
  - 3.2 Skirt
  - 3.3 Salwar Kurta
  - 3.4 Blouse
4. **Madhubani and Phar Painting on Fabric.** **18**
5. **Illustration of Two Ladies Garment as per Current Fashion Trend.** **20**

**Note :** The Essential theory should be taught during the practicals.

### REFERENCE BOOKS :

- |    |   |                            |
|----|---|----------------------------|
| 1  | Patchwork Quilts                        | Colby                      |
| 2  | Tie and Dye Textiles of India           | Murphy                     |
| 3  | Practical Cutting and Tailoring –II     | Ishwer Hajwani & L.R. Hans |
| 4  | Mithila Art                             |                            |
| 5  | Madhubani Paintings                     |                            |
| 6  | Ideas and Techniques for Fabric Design. | Lyida Flower               |
| 7  | Tribal Arts and Drafts.                 | A.K. Das                   |
| 8  | Plangi Tie and dye work.                | Buhler A                   |
| 9  | Tie and dye work journal of Indian art  | Das. C.R.                  |
| 10 | Make your Dress Pattern                 | Brenda Radmila             |
| 11 | Fashion Extras Book                     | Dy. Marsall Convendish     |
| 12 | Designer Clothes                        | Choudhary.                 |

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### DRAWING AND RENDERING

CODE TD 207

**L T P**  
-- -- 5

### RATIONALE

Rendering is something done to the particular drawing to make it more live, more emphasized and more creative.

Drawing and Rendering is of utmost importance for the students of Textiles. In fact, practically it is the backbone for them. Without this subject, one cannot be a perfect designer. It includes each and every aspect of drawing, the different natural and man made objects with different textures and creations.

**CONTENTS**

1. Meaning of Drawing and Rendering
2. How to Draw and Render Study of Related Features

**PRACTICALS**

- |           |   |           |
|-----------|---|-----------|
| <b>1.</b> | <b>Study of the Following with Pencil, Pen &amp; Ink and Water Colours:-</b>  | <b>70</b> |
| 1.1       | Sea Shells, Sea Animals, Fishes   |           |
| 1.2       | Animals.  |           |
| 1.3       | Feathers.   |           |
| 1.4       | Stones and Rocks.   |           |
| 1.5       | Monuments & Building.   |           |
| 1.6       | Jewellery   |           |
| 1.7       | Dry Fruits.   |           |
| <b>2.</b> | <b>Study of Different Body Part for Expression.</b>   | <b>15</b> |
| <b>3.</b> | <b>Cross - Sectional Study of the Following with Water Colours :</b>  | <b>20</b> |
| 3.1       | Fruits and Vegetables   |           |
| 3.2       | Dry Fruits.   |           |
| <b>4.</b> | <b>Conversion of already drawn forms in to Geometrical and Abstract forms with Pencil, Pen and Ink and Water Colours.</b> | <b>15</b> |
| <b>5.</b> | <b>Compositions :</b>   | <b>30</b> |
| 5.1       | Composition of any three forms from Design Point of View with Water and Poster Colours, on 1/4 imp. Sheet.                |           |
| 5.2       | Composition of Cross Sectioned forms from Design Point of view with Pen and Ink on 1/4 imp. Sheet.                        |           |

- NOTE :**
1. A Sketch File for First Three Exercises shall be Maintained by Students having 3 drawings of each Topic with at least 3 Different Angles.
  2. The Essential theory should be taught during the practicals.

**REFERENCE BOOKS :**

- |   |                                  |                     |
|---|----------------------------------|---------------------|
| 1 | Shells                           | Mary saul.          |
| 2 | Gems and Jewels                  | Benjamin Zucker.    |
| 3 | Masterpieces of Indian Jewellery | Jamila Brijbhushan. |
| 4 | Frany Goldfish Culture           | Frank W.Orme.       |

- |    |                           |                 |
|----|---------------------------|-----------------|
| 5  | How Invertebrates Live    | Kaya Mash.      |
| 6  | Garden Plants             | Michael Wright  |
| 7  | Herbs                     | Hemphill        |
| 8  | How to Draw & Paint       | Stan Smith      |
| 9  | Birds Family of the World | Harrison Abrawn |
| 10 | Water Colour and Painting | Ran Ruson.      |

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**CREATIVE TEXTILE DESIGN - I****CODE TD 208**

<b>L</b>	<b>T</b>	<b>P</b>
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**RATIONALE**

Designing is what we create with our observations and creations but with certain principles and limitations. Textile Designing is a field which may be divided in two, as woven and printed fabric designing.

This subject of creative fabric designing is of very much importance to let the students feel the limitation of artwork for actual production. "Creation " in fact, is limited to application that must be clear to the students of textile design when they try to actualize their imaginations on any surface, with consideration to so many other components like weather, age group, method of printing and use etc.

**CONTENTS**

All Different Themes should be Explained in Context of :-

1. Different Placements
2. Different Methods.

**PRACTICALS**

Suggested Exercises :

- |           |   |           |
|-----------|---|-----------|
| <b>1.</b> | <b>Children's Wear :</b>                      |           |
| 1.1       | Theme: Toys and Alphabets (all over)          | <b>15</b> |
|           | For : Night wear / Day wear                   |           |
|           | Fabric : Rubia veil                           |           |
|           | Method : Block Printing                       |           |
|           | Colour Scheme : Maximum Four Colours.         |           |
| 1.2       | Theme: All over Pattern with Colour Patches   | <b>15</b> |
|           | For : Evening Wear,                           |           |
|           | Fabric : Cots wool                            |           |
|           | Method : Batik effect through Screen Printing |           |
|           | Colour scheme : of your Own Choice            |           |

<b>2. Teen Age Wear :</b>		
2.1 Girls Wear :		<b>15</b>
2.1.1 Theme: Floral Pattern (all over)		
For : Tunic/ Dress Material.		
Fabric : Silk		
Method : Block Printing		
Colour Scheme : Three Colours only		
2.1.2 Theme: Anything from Nature		<b>15</b>
For : Skirt		
Fabric : Muslin		
Method : Screen Printing		
Colour Scheme : Own Choice.		
2.2 Boys wear :		
2.2.1 Theme: Animals Skin Textures.		<b>15</b>
For : T – Shirts		
Fabric : Knitted		
Method : Screen Printing		
Colour Scheme : of your Own Choice.		
2.2.2 Theme : Decorative Motifs		<b>15</b>
For : Bush-Shirt		
Fabric : Cambric		
Method : Block Printing		
Colour Scheme : of your Own Choice.		
2.3 Ladies Wear :		
2.3.1 Theme: Jewellery/Ornamental		<b>15</b>
Trees (all over)		
For : House coats/ Evening Wear in Winter		
Fabric: Silk		
Method: Screen Printing		
Colour Scheme: Precious Stone Colours.		
2.3.2 Theme : Shells		<b>15</b>
For: Beach Wear		
Fabric: Sail Cloth		
Method : Screen Printing		
Colour Scheme : According to the Theme.		
2.4 Gents Wear :		
2.4.1 Theme : Tie Dye/Batik / Free hand		<b>15</b>
For : Bush Shirts.		
Fabric : Khadi		
Method : Free hand		
Colour scheme: Minimum Three Colour		

2.4.2 Theme: Graph Weave Effect (all over)		<b>15</b>
For : Shirts		
Fabric : Popline		
Method : Screen Printing		
Colour Scheme: One Colour on		
White Back Ground.		
2.5 Table Cloth, Napkins and Towels :		
2.5.1 Theme: Green Bamboos and their		<b>15</b>
Leaves (all over)		
For : Hand Towels		
Fabric : Toweling Material		
Method : Screen Printing		
Colour Scheme : Keeping in View the Theme		
2.5.2 Theme : Fishes and Sea Animals		<b>15</b>
For : Bath Towel		
Fabric : Ready made Plain Towel		
Method : Screen Printing		
Colour Scheme : Minimum Three Colours		

**Note : The Essential theory should be taught during the practicals.**

#### REFERENCE BOOKS :

1 Ideas and Techniques for Fabric Designing	Lynda Flower
2 Textiles	William Morris
3 The Family of Flowers	Mea Allan
4 Focus on Nature	Wilson
5 Modern Japanese Prints	Frances Blackmore
6 Ancient Egyptian Designs	Eva Wilson
7 Shells	Mary Saul
8 Masterpieces of Indian Jewellery	Jamila Brijbhushan
9 Typographical Ornaments	Luidl Huber
10 Gems and Jewels	Benjamin Zucher.
11 Tropical Aquarium Fisher	Lamp Light
12 Miniature Painting Techniques	Sumahendra
13 Optical and Geometrical	Spyros Horbis
Patterns and Designs	
14 Zoo Animal	Frank W. Layne
15 The Illustrated book of Trees	Nicholson & Clapham

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## PROFESSIONAL MANAGEMENT AND ENTREPRENEURSHIP

**CODE TD 301** **L T P**  
CA 301/ CD 301/ ID 301 2 2/2 --

### RATIONALE

To achieve the targets and goals in an organisation, it is essential to co-ordinate the entire system. For this process the knowledge of principles of management, personnel management, material management and financial management is required.

As the opportunities for wage employment are reducing day by day, Govt. of India realised for the development of entrepreneurship. To make aware the students of different branches of diploma courses, can be learn how to equip themselves for setting up a small scale industry of their own area of study. This course includes the procedure for how to select, proceed and start the small scale industry.

### CONTENTS

	<b>L</b>	<b>T</b>
<b>1. Meaning and Scope of Business :</b>	<b>2</b>	<b>1</b>
1.1 Definition		
1.1.1 Profession		
1.1.2 Trade		
1.1.3 Industry		
1.2 Objectives of business and profession.		
<b>2. Types of Business Organisation :</b>	<b>6</b>	<b>3</b>
2.1 Brief description		
2.2 Advantages and disadvantages of		
2.2.1 Individual		
2.2.2 Partnership		
2.2.3 Cooperative, private		
2.2.4 Public limited organisations		
2.3 Characteristics of small business		
2.4 Business ethics		
2.5 Organisaton charts.		
<b>3. Management Techniques :</b>	<b>3</b>	<b>1</b>
3.1 Leadership		
3.2 Authority		
3.3 Responsibility		
3.4 Functions of Management.		

<b>4. Quality Control:</b>	<b>4</b>	<b>3</b>
4.1 Meaning		
4.2 Importance of keeping standard		
4.3 Factors, responsible for deviation from standards.		
4.4 ISO and ISO-9000 to 9006		
4.5 Total quality management.		
<b>5. Financial Management :</b>	<b>5</b>	<b>3</b>
5.1 Sources of finance		
5.2 Brief idea of		
5.2.1 Cash and credit		
5.2.2 Cheques		
5.2.3 Drafts		
5.2.4 Bill of exchanges		
5.2.5 Promissory note.		
<b>6. Marketing :</b>	<b>6</b>	<b>3</b>
6.1 Basic concept		
6.2 Market research		
6.3 Market promotion		
6.4 Branding		
6.5 Packaging		
6.6 Pricing		
6.7 Planning and development		
6.8 Advertisement media and effectiveness.		
6.9 Sales forecasting		
6.10 Marketing mix		
6.11 Pricing policy		
6.12 Sales promotion and salesman ship.		
6.13 After sales services		
6.14 Complaints and their redress		
<b>7. Material Management :</b>	<b>4</b>	<b>1</b>
7.1 Function and duties of purchase department		
7.2 Purchase order		
7.3 Contracts		
7.3.1 Legality of contracts		
7.3.2 Types of contracts		
7.4 Tenders		
7.4.1 Types of tenders		
7.4.2 Tendering procedure		
7.4.3 Earnest money		
7.4.4 Security money.		



7.5	Function and duties of store department		
7.5.1	Receipt and issue procedure of materials		
7.5.2	Physical verification of store safety in stores.		
<b>8.</b>	<b>Human Relations :</b>	<b>6</b>	<b>3</b>
8.1	Motivating the employees		
8.2	Inter personnel relations		
8.3	Grievances and their handling		
8.4	Staff requirement		
8.5	Training monitoring		
<b>9.</b>	<b>Foreign Trade :</b>	<b>4</b>	<b>2</b>
9.1	Export procedure		
9.2	Channels of distribution in export trade		
9.3	Export promotion		
9.4	Registration of firm/factory in R.B.I, AEPC or others.		
<b>10.</b>	<b>Need and Scope of Entrepreneurship :</b>	<b>8</b>	<b>4</b>
10.1	Need, Scope and characteristics of entrepreneurship.		
10.2	Assistance of small scale industries from national level organisations like SIDO, SIS, NSIC, NRDC, KVIC		
10.3	Assistance of small scale industries from State level organisation like DOI, DIC, RSEB, RFC, SISI, RHDC, pollution control board, Rajasthan khadi & village industries board, commercial banks etc.		
10.4	Facilities to women entrepreneurs.		
10.5	Special to demand based, resource based, service based, import substitute, export promotion, trading at consultancy ventures.		
<b>11.</b>	<b>Project Formulation Process :</b>	<b>12</b>	<b>6</b>
11.1	Steps in planning a small scale industry		
11.2	Structure of a project report		
11.3	Analysis of sample project reports		
11.4	Preparation of project report		
11.5	Techno-economic & feasibility of the project.		
11.6	Financial sources for SSI-Loan from State Govt. by RFC,		
11.7	Credit facilities by banks.		
11.8	Rules & Regulations :		
11.8.1	Licensing & registration procedure		
11.8.2	Important provisions of Factory Act		
11.8.3	Shop & commercial Establishment Act		

11.8.4	Sale of goods Act
11.8.5	Partnership Act
11.9	Income tax, Sales tax & Excise rules -
11.9.1	Municipal bye laws
11.9.2	Insurances coverage.

**Note :** Entrepreneurship awareness camp should be arranged for 3 to 4 days at a stretch. No question will be asked in the examination from the topics under Entrepreneurship Awareness Camp.

**Entrepreneurial Awareness Camp :** Topics to be covered in the camp

1. Who is an entrepreneur ?
2. Need for entrepreneurship, entrepreneurial career and wage employment.
3. Scenario of development of small scale industries in India.
4. Entrepreneurial history in India, Indian values and entrepreneurship.
5. Assistance from District Industries Center, Commercial banks, State Financial Corporation, Small Industries Service Institutes, Research and Development laboratories & other financial and development corporations.
6. Considerations for product selection.
7. Opportunities for business, service & industrial ventures.
8. Learning from Indian experiences in entrepreneurship (Interaction with successful entrepreneurs).

The camp can be arranged by the institution itself with the help of other agencies such as RIICO, Science & Technology Department, Rajcon, DOI etc.

#### REFERENCE BOOKS :

- |  |                                   |
|--|-----------------------------------|
| 1. Hand Book of Small Scale Industry                   | P.M. Bhandari                     |
| 2. Hand Book on Entrepreneurship Development           | O.P. Harkut                       |
| 3. Entrepreneurial Development                         | S.S. Khanka                       |
| 4. Statistical Quality Control                         | Mahohar Mahajan                   |
| 5. ISO : 9000 Quality System-2000                      | S. Dalela                         |
| 6. ISO :14000  |                                   |
| 7. Organization & Management of Small Scale Industries | Desai J.V. Himalaya, Bombay, 1985 |
| 8. Management of Small Scale Industries                | 3rd, Himalaya, Bombay, 1986       |
| 9. The Story of an Entrepreneur                        | M. Nath, IMT Monograph            |

10. Small Industry Entrepreneurs Hand book Mohan K.R.,  
Services International Bombay
11. Hand Book of Entrepreneurship Productivity  
Learning System 1978 Rao & Pareek,  
New Delhi,

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**COMPUTER AIDED TEXTILE DESIGN**

**CODE TD 302** L T P  
-- -- 4

**RATIONALE**

In the present time of computers each and every field of life is touched by computers. Designing with the help of computer is becoming more relevant with time. The main of teaching this subject is to develop skill of designing using different software of textile design in the students.

**CONTENTS**

1. **Explanation of Different Textile Design Software.**
2. **Explanation of Colour Separation Procedure on Computers.**
3. **Explanation of Scanning and Printing Techniques through Computers.**

**PRACTICALS**

- |   | <b>P</b> |
|---|----------|
| 1. <b>Practice on Standard packages of Textile Design for the Following :</b> |          |
| 1.1 Woven Fabric Designing :  | 60       |
| 1.1.1 Tappet Designing  |          |
| 1.1.2 Dobby Designing   |          |
| 1.1.3 Jacquard Designing  |          |
| 1.2 Printed Fabric Designing.   | 30       |
| 1.3 Creations of Stripes and Checks.  | 10       |
| 1.4 Colour Separation for Woven and Printed Fabrics.                          | 10       |
| 1.5 Embroidery Designing.   | 10       |

**Note1. The Essential Theory should be taught during the Practicals.**

**REFERENCE SOFTWARE :**

1. PhotoShop
2. Corel Draw
3. Colour Match
4. Illustrator
5. Global Tex Cad professional
6. Tex Style (Printing Design)

\* \* \* \* \*

**DYEING & PRINTING - II**

**CODE TD 303** L T P  
1 -- 4

**RATIONALE**

After learning the basics of Dyeing and Printing in II year we go for further detailed study for gaining more and overall knowledge of this subject. This subject will enable the students in the field of more sophisticated printing methods like screen, roller, transfer etc. After studying these methods, students will able to compare the different methods and will be able to select the suitable method.

**CONTENTS**

- |   | <b>L</b> |
|---|----------|
| 1. <b>Detailed Study of dyeing of blends.</b>               | <b>8</b> |
| 2. <b>Screen Printing</b>                                   | <b>8</b> |
| 2.1 History of Screen printing in textiles.                 |          |
| 2.2 Equipments and materials for screen printing            |          |
| 2.3 Types of screen   |          |
| 2.4 Methods of screen making                                |          |
| 2.5 Processes for Hand, Flat bed and Rotary screen printing |          |
| 2.6 Main features of screen printing                        |          |
| 2.7 Faults, advantages and disadvantages of screen printing |          |
| 3. <b>Roller printing.</b>                                  | <b>8</b> |
| 4. <b>Transfer printing.</b>                                | <b>3</b> |
| 5. <b>Colour Fastness test.</b>                             | <b>3</b> |

**PRACTICALS**

- |   | <b>P</b>  |
|---|-----------|
| 1. <b>Each student will prepare a file with samples of 40 following</b>               |           |
| 1.1 Dyeing of blended fabrics with colour fastness testing.                           |           |
| 1.2 Printing on surface like paper, plastic and leather.                              |           |
| 2. <b>Single colour screen printing on silken scarf with acid dyes.</b>               | <b>20</b> |
| 3. <b>Double colour screen printing on cotswool fabric with pigments.</b>             | <b>40</b> |
| 4. <b>Triple colour screen printing on salwar suit with rapid and indigosol dyes.</b> | <b>50</b> |

**NOTE : Screen should be prepared by exposing method only.**

**REFERENCE BOOKS :**

1	Fabric Dyeing And Printing	Sturt and Robinson.
2	Technology Of Printing	V.A. Shenai
3	Textile Printing	Joyce Storey
4	Screen Printing	Joyce storey
5	Screen Printing	Tim Mara
6	Textiele Printing	Miles
7	Technology Of Textile Printing	Prayag
8	A Guide To Printing Techniques	Oyabu
9	Chemical Processing Of Polyester Cellulose Blends.	Mittal, Trivedi.
10	An Introduction To Textile Printing	Clarke.

\* \* \* \* \*

**STRUCTURAL FABRIC DESIGN - III****CODE TD 304**

<b>L</b>	<b>T</b>	<b>P</b>
2	--	2

**RATIONALE**

After teaching this subject in First and Second year of the course of study this year the main aim is to develop the qualities of a perfect woven fabric designer in the students. After studying the subject she/he will be able to detect and analyse the defects and will also be able to decide the preventive and curative measures to be adopted.

**CONTENTS**

		<b>L</b>
<b>1.</b>	<b>Basic Working Principles of Dobby &amp; Jacquard. (Introductory)</b>	<b>6</b>
<b>2.</b>	<b>Detailed Study of Figuring with Extra Threads.</b>	<b>10</b>
<b>3.</b>	<b>Detailed Study of Following pile Structure:</b>	<b>16</b>
	3.1 Terry Pile	
	3.2 Warp Pile	
	3.3 Weft Pile	
<b>4.</b>	<b>Study of Backed Cloth.</b>	<b>4</b>
<b>5.</b>	<b>Study of Damask and Compound Brocades.</b>	<b>5</b>
<b>6.</b>	<b>Introduction of Double Cloth.</b>	<b>5</b>
<b>7.</b>	<b>Introduction of Tapestry fabric.</b>	<b>6</b>
<b>8.</b>	<b>Introductory Study of Figured pique Fabric.</b>	<b>4</b>
<b>9.</b>	<b>Inspection of Fabric :</b>	<b>4</b>
	9.1 Common Faults and their analysis.	
	9.2 Preventive and curative measures.	

**PRACTICALS**

<b>1.</b>	<b>Students will Prepare a file with the following</b>	<b>P</b>
	<b>Figurative Designs :</b>	<b>40</b>
	1.1 Extra Warp	
	1.2 Extra Weft	
	1.3 Extra Warp and Weft together	
	1.4 Figured Terry pile	
	1.5 Figured Warp Pile	
	1.6 Figured Weft pile	
	1.7 Damask	
	1.8 Figured Brocade	
	1.9 Designing for Tapestry	
	1.10 Figured Pique Designing	
	1.11 Designing for Double Clothes.	
<b>2.</b>	At least two Designs of each shall be created with draft, peg plan and dent plan on graph paper.	
<b>3.</b>	Construction of Fabric on loom with any one weave mentioned in Theory.	<b>20</b>

**REFERENCE BOOKS :**

1	Watson's Advance Textile Design & Colours.	Z. Groazchi.
2	Grammer of Tex. Design.	H. Nisheth.
3	Textiles in Perspective.	Era Block / Smith.
4	The New American Tapestry.	Ruth and Kanyan.

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**BASIC TEXTILE KNITTING****CODE TD 305**

<b>L</b>	<b>T</b>	<b>P</b>
1	--	2

**RATIONALE**

Knitting has captured a large share of fabric construction in last few years with a significance on export market. Apparel as well as furnishing industry has been benefited with this effective and versatile method of the fabric production, thus it appears essential for a Textile Designer to have a basic idea of knitting fabric construction.

**CONTENTS**

<b>L</b>		
<b>1.</b>	<b>History of Knitting.</b>	<b>3</b>
<b>2.</b>	<b>Definition &amp; General Terminology:</b>	<b>8</b>
	2.1 Wales & Courses	
	2.2 Cut & Gauge	
	2.3 Knitted Stitch	
	2.4 Face of Stitch Loop	
	2.5 Reverse of Stitch Loop	
	2.6 Stitch Density of Knitted Fabric	
<b>3.</b>	<b>Types of Knitting :</b>	<b>4</b>
	3.1 Warp Knitting	
	3.1.1 Basic Warp Knit	
	3.1.2 Tricot Knit	
	3.1.3 Raschel Knit	
	3.2 Weft Knitting	
	3.2.1 Basic Weft Knit	
	3.2.2 Gersy or Plain Knit	
	3.2.3 Rib Double Knit	
	3.2.4 Inter lock Knit	
<b>4.</b>	<b>Primary Knitted Structures :</b>	<b>7</b>
	4.1 Introduction	
	4.2 Plain Knitted Fabric : Its Properties and uses	
	4.3 Rib Fabrics :- Its Properties and uses	
	4.4 Inter Lock Fabric	
	4.5 Single Gersy Fabric and Double Gersy Fabric	
<b>5.</b>	<b>Comparison of Gersy, Rib and Pearl Fabric.</b>	<b>2</b>
<b>6.</b>	<b>Jacquard Knitting.</b>	<b>2</b>
<b>7.</b>	<b>Uses of Knit Fabrics.</b>	<b>2</b>
<b>8.</b>	<b>Different Types of Defects in Knitted Fabrics.</b>	<b>2</b>

**PRACTICALS**

		<b>P</b>
<b>1.</b>	All Possible Stitches and structures to be constructed on available M/c's and equipments for fabric construction (Minimum 5 exercises to be conducted)	<b>25</b>
<b>2.</b>	Preparation of a file of Knitted Fabric samples collected. (Minimum 20 samples to be collected)	<b>25</b>
<b>3.</b>	It is suggested to have at least a field visit of Knitted fabric construction Industry to impart Practical Knowledge to the students. The students will have	<b>10</b>

to submit with practical applicability.

**REFERENCE BOOKS :**

1. A Practical Hand book of Textile Knitting.
2. Textile Fibre to Fabric Corbman
3. Textile Fibres K.P. Hess
4. Textiles Norm Halen Jane Saddler
5. वस्त्र विज्ञान एवं परिधान डॉ. प्रमिला वर्मा

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**FASHION DESIGN AND ILLUSTRATION**

**CODE TD 306**

**L T P**  
-- -- 3

**RATIONALE**

Creativity is the life of a designer. This subject reflects the fashion trends and capabilities of students in fashion market. A student should be able to read and understand human sketches and this has great importance and relation to design construction. Special knowledge of illustration will be effective.

**CONTENTS**

<b>1.</b>	<b>Fashion and Style:</b>	
	1.1 Definition	
	1.2 Classification and types of fashion	
	1.3 Principals of Fashion	
	1.4 Fashion for Forecasting methods and techniques	
	1.5 Influence of fashion on personality	
<b>2.</b>	<b>Brief Knowledge of the Following :</b>	
	2.1 Fashion Trends	
	2.2 Fashion Trade fairs	
	2.3 Fashion shows	
	2.4 Boutique	
	2.5 Fashion Merchandising	

**PRACTICALS**

		<b>P</b>
<b>1.</b>	<b>Line sketches in pencil and Ink :</b>	<b>15</b>
	1.1 Boys and Girls	
	1.2 Ladies	
	1.3 Gents	

## 1.4 Children

2. **Sketches of Boys/Girls/Children/Ladies in pencil /wax/crayons/water and poster colours** 21
- 2.1 Casual Wear (15)
- 2.2 Formal Wear (15)  
(3 Sketches each of Boys/ Girl/Ladies/Gents/Children)
3. **Illustration of different types of Fabrics Plain, Printed, Checks, Dots, Striped and Textured in suitable medium.** 30
4. **Design and Paint Dresses on Fashion Figures according to Textile swatches.** 24

**Note 1.** All sheets should be of  $\frac{1}{4}$  imperial size.

**2.** The Essential Theory should be taught during the Practicals.

**REFERENCE BOOKS :**

- |  |                      |
|--|----------------------|
| 1. How to Draw & Paint Fashion           | Walton T. Foster     |
| 2. Women's Hi Fashion                    | Pioneer Books Co.    |
| 3. Hi Fashion                            | Hema Malini          |
| 4. Fashion Design Illustration for Women | Patrick John Ireland |
| 5. Advance Fashion Sketch Book Vol 1     | Bina Abling          |
| 6. Advance Fashion Sketch Book Vol 2     | Bina Abling          |
| 7. Children's Clothes                    | Conran Actopus       |
| 8. Kiddy's Fashion                       | Wongsubry Press      |
| 9. Fashion Magazines                     |                      |
| 10. Man's Hi Fashion                     | Pioneer Books Co.    |
| 11. Maccalls Vogue & Simplicity          | Monthly Magazines    |

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**FREE HAND DRAWING AND PAINTING**

CODE TD 307

L T P  
-- -- 5

**RATIONALE**

Free Hand Painting is a subject for which students require full confidence in their hands. After learning almost all type of motifs and figure, students are how capable to go hand painting as they have learnt all the forms naturally as well as creatively. After studying the basic forms and shapes, natural and geometrical in IInd year. We move to the human figures and animated forms in IIIrd year. The study of human figures is essential as a part of designing. Likewise animated figures are becoming more important now a days.

**CONTENTS**

1. **Study of anatomy for figure drawing, essential for perfect changing of a figure.**

**PRACTICALS**

- |   |           |
|---|-----------|
|   | <b>P</b>  |
| 1. <b>Figure Study :</b>  | <b>30</b> |
| 1.1 Figure Study in heads   |           |
| 1.2 Figure Study with lines   |           |
| 1.3 Study of human figure (men, women and child) with different angles. |           |

**Note :** A sketch file should be maintained by students with pencil, pen & ink and water colour.

- |   |           |
|---|-----------|
| 2. <b>Compositions :</b>  | <b>30</b> |
| 2.1 A composition of all the three types of human figures with water/ poster colour on 1/2 imp sheet.                                   |           |
| 2.2 A composition of abstract forms with any medium on 1/2 imp sheet.   |           |
| 3. <b>The Students will have to prepare to following artucles with dyes/ poster colours/ water colours/ fabric paints/ oil paints :</b> | <b>60</b> |
| 3.1 Six Greeting Cards  |           |
| 3.2 Six Hand kerchiefs  |           |
| 3.3 Pot Painting / Wall Painting  |           |
| 3.4 Gents Shirt/ Kurta  |           |
| 3.5 Ladies Suit/ Saree  |           |

**Note.** The Essential Theory should be taught during the Practicals.

**REFERENCE BOOKS :**

- |                                  |                      |
|----------------------------------|----------------------|
| 1. Abstract and Floral Design    | E.A. Segnj           |
| 2. Fabric Painting               | Elizabeth, Ratcliffe |
| 3. Abstract Art Pattern & Design | M.P. Vernencil       |
| 4. How to Draw Chatoon           |                      |

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**CREATIVE TEXTILE DESIGN - II****CODE TD 308**

<b>L</b>	<b>T</b>	<b>P</b>
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**RATIONALE**

The last and ultimate aim of Textile Design course is to give best designers to the world. This subject is essence of all. As a designer of textile, a person has to keep a lot of factors in mind like theme, weather, time, fabric countries use, fashion trends, customer's choice etc. and has to get perfect ideas by keeping the above mentioned factors in mind. Students may start their own design studio or can get practical image of their designs by selling them to different printing mills and units.

**CONTENTS**

1. The themes, styles bases and placements should be discussed by teacher for each exercise.
2. To understand the different themes and placements students may be sent to market for collection of fabric samples and a record file of these samples may be prepared by students for proper understanding of different designs.

**PRACTICALS**

- |           |  |          |
|-----------|--|----------|
|           |  | <b>P</b> |
| <b>1.</b> | <b>Practices :</b>   |          |
| 1.1       | Make 2-2 repeat units on following bases and placements :  |          |
| 1.1.1     | Unit Repeating Design  |          |
| 1.1.2     | The drop device :  |          |
| 1.1.2.1   | Half (1/2) drop  |          |
| 1.1.2.2   | One third (1/3) drop   |          |
| 1.1.2.3   | One quarter (1/4) drop   |          |
| 1.1.3     | The diamond.   |          |
| 1.1.4     | The ogee (open ogee, interfacing ogee, closed open ogee)   |          |
| 1.1.5     | The rectangle  |          |
| 1.1.6     | The sateen basis method.   |          |
| <b>2</b>  | <b>Instructions :</b>  |          |
| 2.1       | Every theme of the design must have at least three colour schemes for the final selected design in one repeat unit.    |          |
| 2.2       | Every theme of the design should be in practical No.1 style and it should be in traditional & modern designing styles. |          |

- |           |  |           |
|-----------|--|-----------|
| <b>3.</b> | <b>Practice Exercises :</b>  |           |
| 3.1       | Theme: Chinese Floral Pattern<br>For : Curtain.<br>Fabric : Cotton<br>Colour Scheme : Your own choice<br>Method : Screen Printing  | <b>20</b> |
| 3.2       | Theme : Building and Temples<br>For : Office Curtain<br>Fabric : Satin Cotton<br>Colour Scheme: Minimum five colours.<br>Method : Screen Printing                            | <b>20</b> |
| 3.3       | Theme : Anything from nature<br>For :Long Curtain<br>Fabric :Tapestry cloth<br>Colour Scheme : Minimum four colours<br>Method : Screen printing.                             | <b>20</b> |
| 3.4.      | Theme : Egyption human figure<br>For : Curtain<br>Fabric : Cotton Satin<br>Colour scheme : Own Choice<br>Method : Screen printing  | <b>20</b> |
| 3.5       | Theme : Musical Instruments<br>For : Bed cover<br>Fabric : Long cloth.<br>Colour Scheme : of your own choice<br>Method : Block Printing                                      | <b>20</b> |
| 3.6.      | Theme : Geometrical & floral pattern in Japanese form<br>For : Bed cover<br>Fabric : Plain cotton Sheet<br>Colour scheme : Minimum three colours<br>Method : Screen printing | <b>20</b> |
| 3.7       | Theme : Decorative human figures<br>For : Bed Sheet<br>Fabric : Plain Bed Sheet<br>Colour Scheme : Minimum three colours<br>Method : Screen Printing                         | <b>20</b> |
| 3.8       | Theme : Russian Design<br>For : Bed Cover<br>Fabric : Cotton Satin<br>Colour scheme : Maximum five colour<br>Method : Screen printing  | <b>20</b> |

55

3.9 Theme : Own choice in Modern style

For : Saree all over  
 Fabric : Synthetic  
 Colours Scheme : Maximum seven colours.  
 Method : Screen printing.

3.10 Theme : Own choice in Traditional style 55

For : Saree all over  
 Fabric : Cotton  
 Colour scheme : Minimum three colours  
 Method : Screen printing.

**Note 1: Size of themes from 3.1 to 3.8 should not be less than 10"x10".**  
**2 : Size of themes 3.9 & 3.10 should not be less than 18"x45".**  
**3 : The Essential Theory should be taught during the Practicals.**

**Note for Paper Setters : Since the boards examination will be of 12 hrs. Only thus the size for exercise no. 3.9 & 3.10 should be reduced for examination, keeping in mind the duration examination.**

**REFERENCE BOOKS :**

- |   |                                |
|---|--------------------------------|
| 1. Modern Japanese Prints                       | Frances Blackarmore            |
| 2. Russian Textile Design                       | Arove Art Publishes Lemirngrad |
| 3. Ancient Egyptian Design                      | Wilson                         |
| 4. Easy Way to do Chinese Painting              | Chin Chow Chain                |
| 5. The Family of Flowers.                       | Mea Allen                      |
| 6. Optical and Geometrical Patterns and Designs | Spyrose                        |
| 7. Silver Study of Design                       | Mark Truner                    |
| 8. The Family Encyclopedia of Animal Life.      |                                |
| 9. Birds Family of the World                    | Harrison Abrown                |

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**PROJECT**

Project work shall be assigned to the student at the start of III year classes, registered as per B.T.E.R. Rules & Regulation and will be carried out after the final Examination for 3rd year, for twenty four continuous working days.

The project can be assigned to the students individually or in groups. Project work shall consist of the actual task and the report writing. The actual task may be of different nature like designing, fabrication, survey and studies in market / organisation, etc. Some other problems may be given as per the need and local conditions. Facilities of computer may be utilized for the project work.

It is further advised that the topics of the project may be decided at the beginning of the IIIrd year. The students may also be encouraged to collect material and do preparatory work during the year of study.

At the end of the project, a project report should be submitted by each student before the final assessment. The assessment of the project should be of continuous nature through out the project duration. The final assessment will be done immediately after completion of project by examiners on the basis of project report, work done during the project and viva - voce.

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