

STUDY AND EVALUATION SCHEME FOR DIPLOMA PROGRAMME IN TEXTILE DESIGN

Fourth Semester

Sr. No.	Subject	L	T	P	Total	Evaluation Scheme						Total Marks
						Internal Assessment		External Assessment (Examination)				
						Theory	Practical	Theory		Practical		
						Max. Marks	Max. Marks	Max. Marks	Hrs.	Max. Marks	Hrs.	
4.1	Design Studio	2	-	7	9	-	100	-	-	150	3.00	250
4.2	Woven Fabric Design-IV	2	-	3	5	30	30	70	2.5	50	3.00	180
4.3	Fabric Manufacture	2	-	3	5	30	30	70	2.5	50	3.00	180
4.4	Textile Coloration-II	2	-	3	5	30	40	70	2.5	50	3.00	190
4.5	CATD-II	-	-	4	4	-	50	-	-	100	3.00	150
Industrial Exposure (Assessment at Inst. Level)+		-	-	-	4	-	25	-	-	-	-	25
Disc/ Games/SCA/NCC/NSS #		-	-	-	4	-	25	-	-	-	-	25
Total		8	-	20	36	90	300	210	-	400	-	1000

+ Industrial visit compulsory to minimum 2 industries or Departments.

General Proficiency will comprise of various co-curricular activities like games, hobby clubs, seminars, declamation contests, extension lectures, NCC, NSS and cultural activities etc.

Six week project based industrial training as per details specification in major project syllabus, out of six week, four weeks during vacation after 4th semester & two weeks after 5th semester till commencement of 6th semester industrial oriented training cum major project work will be evaluated in 6th semester by as examiner from industry.

4.1 DESIGN STUDIO

L T P
Periods/week 2 - 7

RATIONALE

Students will have to make design for sari, dress material, upholstery. Ideas and concept of world textile design (motifs and color combination).

DETAILED CONTENTS

PRACTICAL EXERCISES

Subject aim at exposing the students to experiment on the practical aspect to a finished product. Student has to select a style, embroidered/painted/printed/woven/dyed fabric and then make at least 10 designs using computer – coral and Adobe Photoshop. They can continue one or more style and finish a complete product with 4 different colour ways, at least 50 croques should be made before a final design chart, visualization is made and approved by the supervisor with at least 3 to 4 colour schemes. Style of printings to be discussed-

1. Direct style- block, stencil, screen, roller, photographic printing.
2. Resist style- Tie and dye, batik
3. Discharge style-

Students will have to make design for sari, dress material, upholstery.
Ideas and concept of world textile design (motifs and color combination).

- 3.1 Persian
- 3.2 Chinese
- 3.3 Egypt
- 3.4 Japanese
- 3.5 European
- 3.6 Indonesian

* PRACTICAL SUBJECT

Notes:-1.in a semester students is required to make 2-4 paper design and then the suggested paper designs have to be implemented in various styles on fabric.

SUGGESTED DISTRIBUTION OF MARKS

Topic	Time Allotted (Period)	Marks Allocation (%)
1	8	25
2	8	25
3	16	50
Total	32	100

4.2 WOVEN FABRIC DESIGN-IV

L T P
Periods/week 2 - 3

RATIONALE

The students of textile design are supposed to have knowledge and skill regarding various advanced weaves and their construction. Hence, in this subject, students will learn different weaves, their method of employment to acquire competency for production of woven designs for different end uses.

DETAILED CONTENT

THEORY

1. Principle of formation of terry pile construction of three, four, five and six pick terry pile weaves. Their methods of drafting and denting.
2. Pile fabrics; Introduction of plain warp pile fabric design in detail. Introduction of weft pile fabric design.
3. Construction of bed ford cord and wadded bed ord.
4. Welts and pique, methods of embellishing pique fabrics.
5. Production of simple colour and weave effects.

PRACTICAL EXERCISES

1. Analysis of fabrics
 - 1.1 Objects and methods of analyzed fabric
 - 1.2 Particulars to be analyzed
 - 1.3 Identifying arp and weft in the fabric
2. Analysis of following fabrics.
 - 2.1 Gents Shirting (Cotton)
 - (a) Stripes on loom
 - (b) Small geometrical motifs on doobby loom
 - 2.2 Gents Suiting
 - (a) Trouser length with colour effect in plain weave
 - (b) Tweed material for jackets in wool
 - 2.3 Ladies dress material

RECOMMENDED BOOKS

1. Grammar of textile Design- Nisbet
2. Structural Fabric Design by Kilby
3. Woven structures and design- Doris Goerner, British Textile Technology Group
WIRA House, Leeds UK
4. Fiber to Fabric by Ghosh
5. Watson's Advance Textile Design
6. Watson's Textile Design and Colour
7. Knitting Technology- Spencer
8. Warp Knit Fabric Construction by Charis Wildens U.Wilkens Verlag Germany
9. Simple Fabric Structure by SS Satsangi

SUGGESTED DISTRIBUTION OF MARKS

Topic	Time Allotted (Period)	Marks Allocation (%)
1	12	40
2	8	24
3	4	12
4	4	12
5	4	12
Total	32	100

4.3 FABRIC MANUFACTURE

L T P
Periods/week 2 - 3

RATIONALE

The diploma holders in textile design are supposed to have knowledge and skills related to various looms and manufacturing of fabric. Thus in this subject, student will learn manufacturing techniques and mechanism employed to produce woven and knitted fabric.

DETAILED CONTENTS

SECTION : A

Manufacturing techniques and Mechanism employed to produce woven fabric

1. Objects of sizing, sizing ingredients and their functions, passage of material through sizing machine.
2. Dobby-Introduction Mechanism of climax doobby, principle of single double lift doobby.
3. Principle of drop box motion.
4. Jacquard-Different types of jacquard, principle of single and double lift jacquard, Cross border and inverted hook jacquard, card arrangement for double lift double cylinder jacquard. Different Jacquard harness ties-straight, border, cross etc.
5. Salient features of shuttleless looms.

SECTION : B

Manufacturing techniques and Mechanism employed to produce knitted fabric

1. Introduction and classification of knitted fabric.(Types of knitting needles, their knitting cycle)
2. Elementary of Weft knitting (plain, rib, interlock) and warp knitting.

PRACTICAL EXERCISE

1. Demonstration in Textile Mill.
2. Study of Dobby and their function.
3. Demonstration of Drop box.
4. Study of Jacquard and their function.
5. Industrial visit to show working of dyeing machines.

RECOMMENDED BOOKS

1. Weaving Mechanism Vol. I & II by NN Banerjee
2. Fancy Weaving by K T Aswani
3. Winding and warping by BTRA
4. Warp Sizing by JB Smith
5. Principle of Weaving by Marks and Robinsons
6. Yarn Preparation Vol I & II by R Sen Gupta
7. Mechanism of Weaving by WM Fox

SUGGESTED DISTRIBUTION OF MARKS

Topic	Time Allotted (Period)	Marks Allocation (%)
1	8	24
2	8	24
3	4	14
4	8	24
5	4	14
Total	32	100

4.4 TEXTILE COLOURATION – II

L T P

Periods/week 2 - 3

RATIONALE

A diploma holder in textile design must have sufficient knowledge and skill about principles of pretreatment as well as dyeing and printing and operation. Textile designer should be able to execute various recipes for dyeing and printing pretreatment, material, equipment and process used for textiles.

DETAILED CONTENTS

THEORY

SECTION- A- Textile Dyeing

1. Application of Dyes on wool/silk
 - 1.1 Basic/ Acid/Metal complex dyes.
2. Application of Dyes on Synthetics
 - 2.1 Acrylic with Basic Dyes
 - 2.2 Polyester/ Terelene with Disperse Dyes
 - 2.3 Nylon/ Polyamides with Acid Dyes
3. Introduction to machinery/equipments used in dyeing
 - 3.1 Fiber Dyeing machine (Stock dyeing)
 - 3.2 Hank Dyeing and Beam Dyeing
 - 3.3 Union and cross Dyeing Machine
 - 3.4 Jet Dyeing Machine
 - 3.5 Jigger Dyeing Machine

SECTION- B- Textile Printing

1. Printing in resist/ reserved style
 - 1.1 Batik style and tie and dye
 - 1.2 Pigment resist under reactive ground
 - 1.3 Vat resist under Vat Dyed ground
2. Method of Preparation of screens.
 - 2.1 Enamel Method
 - 2.2 Photoelectric/Photographic Method
3. Transfer Printing
 - 3.1 Sublimation or dry heat Transfer Printing
 - 3.2 Melt & Film release Transfer Printing
 - 3.3 Wet Transfer Printing

LIST OF PRACTICALS

1. Printing of wool and silk in direct style of printing
 - 1.1 Acid dyes
 - 1.2 Basic dyes
 - 1.3 Metal complex dyes
2. Printing of synthetic fabric in direct style of printing
 - 2.1 Disperse dyes
 - 2.2 Acid dyes
 - 2.3 Basic dyes

RECOMMENDED BOOKS

1. Chemistry of dyes and Principle of dyeing – V A shenai (Vol.2) Sevak Publications, Mumbai
2. Technology of dyeing – Shenai (Vol.5) Sevak Publications, Mumbai
3. The dyeing of Textile materials – Prente Cegarra
4. Technology of printing by V A shenai (Vol.2) Sevak Publications, Mumbai
5. Technology of printing by Kalley
6. Dyeing and Printing by Kalley
7. Dyeing and Printing by Varke
8. Introduction to Textile Printing by Clark
9. Chemical Processing of synthetic fibers and blends by Datye K V and Vaidye A A, John wiley and sons, New York
10. Dyeing and chemical technology of textile fibers , ER Trotman, Charles Griffin & Co Ltd London
11. A glimpse of chemical Technology of fibrous Materials by RR Chakravorty, Mahajan Publication, Ahmedabad
12. Dyeing and Printing by Jyoce storey
13. Manual of Textile Printing by Story

SUGGESTED DISTRIBUTION OF MARKS

Topic	Time Allotted (Period)	Marks Allocation (%)
1	4	12
2	4	12
3	12	40
4	4	12
5	4	12
6	4	12
Total	32	100

4.5 CATD – II

L T P
Periods/week - - 4

RATIONALE

The term CAD has found its way into all major discipline that have got anything to do with designing or drafting techniques. The major objective of this course is to expose the students to different software available in the field of textile design industry so that they are able to use those software in the design and construction of various textiles.

DETAILED CONTENTS

RELATED THEORY FOR PRACTICAL EXERCISES

1. Philosophy and utility of CATD system, working with various standard software package like Photoshop, Coral Draw, Ned Graphics, Auto Tex(for textile design) Nanosoft, Textronics.
2. Understanding graphics representation, file conversion, drawing simple geometric figures, capturing a single colour picture design using CCD/ Scanner.
3. Uses of computer to construct design on different bases with reference to various arrangements for woven design.
4. Uses of CATD in various end uses in single colour viz dress material, upholstery, furnishing, label & embroidery with help of Ned Graphics, Auto Tex (for Textile Design), Textronics
5. Understanding of digitizer and making design with the help of digitizer using Painter.

PRACTICAL EXERCISES

1. To draw 3 geometrical folk design with coral draw.
2. To do colour ways of the Ex.1 using coral draw.
3. Create different textures for background and design motifs/natural objects which the student will create using digitizer.
4. Make 3 woven design for shirting material using different strip, checks, dals.
5. Do colour ways of Ex.4.
6. Scan a 10 inch X 15 inch design and learn to stitch making a single image.
7. Design a logo for your production unit with written words also.
8. Understanding and uses of electronics pen on the tablet freely and intuitively.
9. Creating flowers and digitally using a tablet.

RECOMMENDED BOOKS

1. CAD in clothing and textiles by W.Aldrich.
2. A magazine on Computer in the world of Textiles.
3. Ned Graphics.
4. Coral and Photoshop.
5. Wacom Digitizer with Paint Software.