

**REGULATIONS AND SYLLABUS**  
**FOR**  
**DIPLOMA IN FASHION DESIGNING AND APPAREL PRODUCTION (DFDAP**  
**2011)**

*Offered by*

CCII (Centre for Collaboration of Industry and Institutions)

***BHARATHIAR UNIVERSITY***  
***(UNIVERSITY INDUSTRY INTERACTION PROGRAMME)***

### **Description of the Course / Objective of the Course**

The Indian apparel industry is facing an unfolding global competition since the dawn of 2005. In this context, the **DIPLOMA IN FASHION DESIGNING AND APPAREL PRODUCTION** Programme is designed with the objective of developing competent technical professionals for meeting the demands of the Indian apparel industry. The DIPLOMA IN FASHION DESIGNING AND APPAREL PRODUCTION is a 1 year Diploma course for students who wish to do higher studies in knitwear designing and knit garment making and those working in the industry and aspiring to obtain an academic diploma.

### **Regulations**

#### **1. Admission Criteria:**

Pass in 10 +2 or A pass in 10+2 or 10+3 year Diploma awarded by any state board of Technical Education (or) its equivalent thereto.

#### **2. Course Duration:**

The course shall extend over a period of one year comprising of one year (annual pattern). Examinations shall be conducted at the end of every year for the respective subjects. The academic year will be normally spanning the period from July to June.

#### **3. Medium of Instruction:**

English shall be the medium of instruction.

#### **4. Courses and Scheme of Examination:**

The course of study for the DIPLOMA IN FASHION DESIGNING AND APPAREL PRODUCTION course shall consist of the subjects as in section 6.

Being practical oriented programme the focus will be more for practical training. The candidate shall undergo a practical training in various activities of Fashion Designing and Processes of Apparel Making. Students will be given more case studies during the Industrial training and they have to submit a report thereon during the course period and also at the end of the year on dates announced by the institute/department. The guideline for training shall be provided by the institute / department. Every theory paper shall have at least 90 contact hours of study including the period of study in the industries.

The candidates are expected to spend at least 180 hours per practical paper in the industries and / or Institute laboratories.

#### 5. Requirement to appear for examination:

A candidate will be permitted to appear for the University Examination for any year if he/ she secure not less than 75 % of attendance in the number of instructional hours / practical's in the industries and / or Institute laboratories during the year, failing which he / she should redo that course of study.

#### 6. Scheme of Examinations

S.No	Subject Code	Title of the paper	Distribution of Marks		
			CIA	EA	Total
1.	11 FD 01	Introduction to Textiles	40	60	100
2.	11 FD 02	Fashion Design concepts and Methodology	40	60	100
3.	11 FD 03	Garment Construction	40	60	100
4.	11 FD 04	Techniques of surface ornamentation	40	60	100
5.	11 FD 05	Fashion Designing and Illustration- Practical*	40	60	100
6.	11 FD 06	Garment Construction –Practical*	40	60	100
<b>Total</b>			<b>240</b>	<b>360</b>	<b>600</b>

**CIA** - Continuous Internal Assessment    **EA** External assessment

\* In case of Practical subject, CIA will be given by continuous assessment made by an internal examiner who has handled the respective subject during the course period and EA will be given by assessment made by an another internal examiner of the same institute during the practical examination.

#### 7. Passing minimum:

To pass

- A Candidate shall secure a minimum of 50 % marks individually in the practical and Theory Examinations. A candidate failing in any one component will have to reappear for that particular component only in the supplementary examination.
- The Candidate shall secure 50% marks in both Internal and External Examinations.

## 8. Classification of Successful Candidates

- a. All candidates securing not less than 75% of the aggregate marks shall be declared to have passed in **FIRST CLASS with DISTINCTION** provided they have passed the examination in every subject without failure in anytime within the course of study.
- b. All the candidates securing not less than 60% of the aggregate marks shall be declared to have passed in **FIRST CLASS** provided they have passed the examination in every subject.
- c. Other successful candidates shall be declared to have passed the examinations in **SECOND CLASS**.

## 9. Conferment of degree:

A candidate who has passed all the examinations as prescribed, shall be eligible to receive the “**DIPLOMA IN FASHION DESIGNING AND APPAREL PRODUCTION**” from the Bharathiar University.

## 10. Question Papers

The university examinations shall be conducted for 100 marks and it will be converted to 60 marks as an external examination. The pattern of question papers for all the subjects shall be as follows:

Section A: Objective type of questions with no choice 20% (20 questions – 4 from each unit)

Section B: Short answer questions of either / or type 30% (5 questions – 1 from each unit)

Section C: Essay type questions of either / or type 50% (5 questions – 1 from each unit)

## 11. Internal Assessment Components:

Tests	: 20 Marks
Assignments	: 10 Marks
Involvement & Discipline	: 10 Marks
Total	: 40 Marks

## 11 FD 01 INTRODUCTION TO TEXTILES

### Unit- I

Introduction to textiles. Polymerisation –Types of polymers-requirements of fibre forming polymers- Definition of textile fibre and filament. General considerations with regard to fibre properties.

Classification of fibers. Brief study on Cotton, Silk, Wool & Bast fibers (flax & jute only). Introduction to Manmade fibers – Filament Spinning methods - Brief study on Semi Synthetic fibers: Viscose, HWM fibers (modal and tencel) & Acetate fibres with their properties – Brief study on Synthetic fibers (polyester, nylon, polyacrylic & spandex) and their properties.

### Unit II

Introduction to Yarn Formation-Cotton Yarn Production sequence and Objectives– Comparison of Carded and Combed Yarn- Quality requirements for Hosiery Yarn. Study of Yarn numbering systems – Yarn and Package defects.

### Unit III

Classification of Fabric forming methods-Weaving operation – Process sequence- Comparison between Knitting and Weaving- Classification of Looms.

Knitting Terms & Definitions - Comparison of Weft and Warp Knitting Classification of Warp and Weft Knitting Machines - Weft Knitting Machine Elements.

### Unit IV

Knitting Cycle of Single Jersey & Double Jersey - Basic Structures - Modern Knitting Concepts & Specialty Knitting - Simple Calculations Weft Knitting Stitches & Notations - Basic Weft Knit Structures - Properties - Derivatives of Single Jersey, Double Jersey Fabrics - Identification of Swatches.

### Unit V

Introduction to Wet Processing – Brief Study of Preparatory Processes of Dyeing and Objectives – Meaning of Dyes and Pigments – Various Classification Methods of Dyes – Principle & Method of Dyeing of Cotton Knitted Fabric – Principle and Working of Jigger, Beam Dyeing, Winch, Soft Flow and Air Flow Machines.

Introduction to Printing – Brief Study on Different Styles of Printing & Different Methods of Printing - Defects in Dyed and Printed Cloths: Causes and Remedies.

Introduction to Finishing - Mechanical and Chemical Finishing.

### References:

1. Textiles: Fiber to Fabric 6<sup>th</sup> Edition , Bernard P. Corbman, International students' edition, McGRAW Hill International Edition book co Singapore (1985).

2. Fabric science, 5th edition, Joseph J.P. et al. Fairchild publications, New York (1990).
3. Textile chemistry, Peters R.H. Vol i, ii, Textile Institute Manchester 1970.
4. Technology of textile processing, Shenai V.A. Vol i, ii, v, vii, Sevak publications, Bombay 1981.
5. Textile Science 2<sup>nd</sup> Edition, E.P.G. Gohl & L.D. Vilensky, CBS Publishers and Distributors 2006

## **11 FD 02 FASHION DESIGN CONCEPTS AND METHODOLOGY**

### **Unit – I**

Introduction to Fashion – definition and origin - terms & definitions - reasons for change in fashion - - classification of fashion – Style, classic, FAD, Trend - fashion cycle. Fashion designing - designers' role in styling and production of costumes.

### **Unit – II**

Design – Definition, Types - Structural and decorative design. Elements of design – line, shape, form, colour & texture. Lines – varieties and their application in a design. Shapes - Types – Natural, stylized, geometrical, and abstract.

Colour – Definition and origin – Characteristics (hue, value and intensity) - Prang colour chart - color harmony and colour schemes. Psychology of colour and its application in apparel market. Texture – types of texture and its application in clothing.

### **Unit – III**

Principles of design - Balance, proportion, rhythm, harmony & emphasis. Balance - asymmetrical and symmetrical. Types – Formal, Informal and radial. Proportion or scale – planning the shapes and space.

Rhythm – through repetition, alternation, progression and gradation. Emphasis using contrast colours and background. Harmony of lines, shapes, colour and textures.

### **Unit IV**

Introduction to neck lines, waistlines, hemlines, collars, sleeves, cuffs, plackets and pockets. Fullness applied in apparel –tucks, pleats, gathers, shirring, frills or ruffles, flounces.

### **Unit V**

Silhouettes – Types and their application in everyday use. Skirts - Basic concepts in designing the variety of skirts. Trousers – Basic concepts in designing the variety of trousers.

Wardrobe planning - design development for formal, casual, party and sports wears for men, women and kids based on their location.

### **Reference:**

1. Sumathi, G.J. “Elements of Fashion and Apparel Design” New Age International Publishers, New Delhi.
2. Kathryn McKelvey “Fashion Source Book” Balckwell Publishing New Delhi.
3. Jane Mills and Janet K.Smith “Design Concepts” Fairchild Publications, New York.
4. Judith Rasband ‘Wardrobe strategies for women’, Delmar publishers, London.
5. Jeannette A.Jarnow, Mirianr Guerreiro & Beatrice Judelle, ‘Inside the fashion business’ 4th edition Mac Millan Publishing Company, New York.

## **11 FD 03 GARMENT CONSTRUCTION**

### **Unit - I**

Elements and Functions of Clothing-Garment Analysis and Its Classification - Measurement and Size Charts for Men, Women, and Children - Requirement and Breakdown of Garments Flow Process - Torso and Bifurcated Garments – Case Study on Standard Body Measurements of Different Countries for Men, Women and Children Clothing.

### **Unit – II**

Concepts of Basic Pattern and Grading – Rules for Developing Basic Patterns – Pattern Materials & Limitations – Pattern Making Tools – Introduction to Computer Aided Pattern Making and Grading.

Developing Necklines in Jewel Neck - Round Neck - 'U' Neck - Square Neck - Pentagon Neck Star Neck - Inside and Outside Scallop Bateau Neck Developing Sleeves in Plain - Loose - Puff Sleeves.

Concepts and Theories for Making Components and Parts for Fashionable Garments of Different Categories.

### **Unit – III**

Drafting and Cutting the Patterns of following Styles Basic T Shirt - Polo Shirt - Singlet - Athletic Sport - 'V' Neck.

Drafting and Cutting the Patterns of following Styles High Neck - Henley Neck - T Shirt with Hood - Raglan Sleeve - Kimono Sleeve

Drafting and Cutting the Patterns of Following Styles Children's Wear - Night Wear - Brief - Shorts – Legging

Defects in Pattern, Causes and Remedies. Checking Fit of the Garments. Causes for Poor Fit

### **Unit - IV**

Description of Basic Garment Sewing Machinery - Parts - Needle, Take-Up Lever, Bobbin, Bobbin Case, Presser Foot, Tension Disc, Feed Dog.

Identification and Classification of Sewing Machineries: Lock Stitch, Chain Stitch, Over Lock and Flat Lock.

Machine Bed Types: Flat Bed, Cylindrical, Raised and Clamp Type. Feed Mechanisms: Drop, Needle Feed, Differential, Puller, and Clamp Feed. Various Attachments: Presser Feet - Sewing Guides - Folders, Binder, Edge-Guides.

## **Unit – V**

Brief Study on Classification of Stitches & Seams and their Applications. Study about Flow of Processes for Sewing Various Styles of Garments. Various Sewing Defects, Causes and Remedies.

Brief Study on Trims and Accessories: Sewing Thread, Needle, Label, Zips, Lining, Interlining and Fasteners. Quality Parameters of Accessories and Trims.

### **References:**

1. Pattern making for fashion design - h.g. Armstrong
2. Metric pattern cutting - Winifred Aldrich
3. Pattern making made easy - gollian Holman
4. Technology of clothing manufacture - Carr & Latham
5. Apparel manufacturers handbook - Jacob solinger
6. Guide to sewing machine
7. Catalogues of accessories

## **11 FD 04 TECHNIQUES OF SURFACE ORNAMENTATION**

### **Unit – I**

Introduction to Surface Ornamentation and Embroidery – General rules for Hand and Machine Embroidery – Special Attachments to Sewing Machines for Embroidery – Tools and Equipments – Needles – Threads.

### **Unit – II**

Hand Embroidery stitches - Running Stitch – Laced Running Stitch - Back stitch – Stem Stitch – Satin stitch – French Knot - Bullion Knot – Cross Stitch - Blanket Stitch – Button Hole Stitch – Corel Stitch – Spider Web Stitch – Fly Stitch – Feather stitch - Chain Stitch – Lazy Daisy Stitch – Roumanian



Stitch – Chevron Stitch – Cretan Stitch – Faggoting Stitch – – Fern Stitch – Fish Bone Stitch – Herringbone Stitch – Couching.

Techniques of Crocheting, Tatting and hand knitting to produce different designs.

### **Unit – III**

Special stitches - Counted thread work on canvas material – Drawn Thread Work – Cut Work – Bead Work – Mirror Work – Sequins Work. Designing and producing fabric appliqués and placing it on children and women’s apparel.

### **Unit – IV**

Introduction to print designs – Repeat Patterns – Block, Drop, Brick Variations. Tie and dye techniques – Spotting, Marble effect, Chevron effect using stitches and different types of folding to create new designs.

Techniques of Batik – Free hand drawing, Stitches over a design, Marble effect, splashing of wax on fabric before dyeing and other creative ideas. Fabric Painting – Outline drawing, Shading with dry and wet strokes. Stencil preparation and use of stencils to produce designs - tooth brush spraying and other creative techniques.

### **Unit - V**

Machine embroidery stitches using SNLS machines – running stitch, long and short stitch, cut work. A detailed study on computerized embroidery machines – Concept of designing using software – Method of punching designs – Special attachments for sequins – Cording – Boring – Chenille works.

### **References:**

1. Encyclopedia of Embroidery Stitches Including Crewel – Dover Publications – 1974
2. Computerized Encyclopedia of Needle Work – Therese De Dillmont – 3rd Edition.
3. Decorative Painting Techniques Book – Val Holmes – 2003
4. Traditional Indian Motifs for Weaving and Printing
5. 5000 Designs and Motifs from India – Ajit Mookerjee – 1996
6. Barudan / Tazima / ZSK Embroidery Machines Catalogue

## **11 FD 05 FASHION DESIGNING AND ILLUSTRATION-PRACTICAL**

### **Part A**

1. Free hand drawing of lines and strokes. Drawing Heads and faces – Hairstyles – arms, hands, legs and feet.
2. Introduction to 8 head theory and developing a stick figure into block and flesh figures. Understanding the basics of different head theories and application of 10 head theory in illustration.
3. Rendering of fabric swatches and fabric drapes using different media – colour pencils, marker pens, water colour, poster colours and drawing ink.
4. Introduction to flat sketches - different types of skirts, trousers, necklines, collars, sleeves, coats and jackets.
5. Designing flat sketches for children – Boy and Girl - casual wears, night wear, and sportswear and occasional wear.
6. Designing flat sketches for women – Formal wear - casual wear - sportswear - night wear - lingerie - beach wear, party wear and ballroom gowns.
7. Designing flat sketches for men - Formal wear - casual wear – sportswear
8. Illustrating children – Boy and girl in Front view, Back view, Side view and 3/4<sup>th</sup> view adopting the head theories.
9. Illustrating Women in Front view, Back view, Side view and 3/4<sup>th</sup> view adopting the head theories.
10. Illustrating Men in Front view, Back view, Side view and 3/4<sup>th</sup> view adopting the head theories. Converting photographic poses from magazines into fashion illustration – stylized figures .
11. Creation of Portfolio – Preparation of mood board – customer profile - color palette - swatch board - - flat sketch and illustration.

## **Part B**

### **Computer Applications in Fashion Designing**

1. Using MS Word, Prepare the Given Report.
2. Using MS Excel, Prepare the Given Balance Sheet.
3. Using MS Excel Get the Output in Various Formats Such As Histogram, Pareto Chart Etc., For the Given Data.
4. Using MS Excel do the Given Calculation and Prepare the Required Statement.
5. Using MS Power Point Prepare The Flow Chart and Presentation Slides for the Given Topic.
6. Design new motifs and create print designs using Coral draw package.
7. Work on Adobe Photo Shop and create portfolios.
8. Using Illustrator software, illustrate men and women in different costumes.

### **References:**

1. Fashion design illustrator (men, women, children) - patric john Ireland

2. Fashion design drawing and presentation - patric john Ireland
3. Fashion sketch book – bina Abling
4. Advanced fashion sketch book – bina Abling

## **11 FD 06 GARMENT CONSTRUCTION- PRACTICAL**

### **Section A: Making of Patterns:**

Draft and Construct the Pattern of Given Style / Sample as Per the Specification Given.

#### **MEN'S WEAR**

- 1 Basic T-Shirt
2. Polo T-Shirt
- 3 T-Shirt with Full Sleeve.
4. T-Shirt with Raglan Sleeve.

#### **KIDS WEAR**

1. Bib
2. A Line Frock
3. Plain Frock
4. Ramber

#### **WOMEN'S WEAR**

1. Ladies Tops
2. Ladies Shirt
3. Blouse
4. Skirt "A Line"

### **Section B: Machine Parts and Threading:**

1. Draw the Threading Diagram of SNLS Machine and Describe the Various Parts of Machine.
2. Draw the Threading Diagram of Ovelock Machine and Describe the Various Parts of Machine.
3. Draw the Threading Diagram of Flatlock Machine and Describe the Various Parts of Machine.

### **Section C: Pedaling Exercise on Paper and Fabrics:**

1. Straight and Curves
2. Squares, Rectangles
3. Triangles and Unlimited Shapes

### **Section D: Making of Various Seams and Components:**

1. Various Seams Types - Superimpose, Bound, Lap, Piping Etc..
2. Samples of Components Such as
 

A. Round Neck	B. Scallop Neck
C. Gents Placket	D. Ladies Placket
E. Cross Pocket	F. Band Collar

### **Section E: Making of Final Garments**

Draft The Pattern, Cut & Construct The Following Garments For The Given Measurement:

1. Men's Crew Neck / Henley Neck / Raglan Sleeve Shirt
2. Men's Vest RN / RNS
3. Ladies Skirt

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