Curriculum for

P. G. Diploma Programme in

FASHION TECHNOLOGY
(TWO SEMESTER)

For the State of Uttar Pradesh

Prepared by:

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Institute of Research Development & Training

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Kanpur-208002

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Implemented by:
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CORRECTED AND APPROVED BY BOARD OF TECHNICAL EDUCATION,LUCKNOW IN CDC MEETING DATED:18-11-2020 @RASHMI SONKAR

CONTENT

PREFACE

An important issue generally debated amongst the planners and educator's world over is how technical education can contribute to sustainable development of the societies struggling hard to come in the same bracket as that of the developed nations. The rapid industrialization and globalization have created an environment for free flow of information and technology through fast and efficient means. This has led to shrinking of the world, bringing people from different culture and environment together and giving rise to the concept of world turning into a global village. In India, a shift has taken place from the forgettable years of closed economy to knowledge based and open economy in the last few decades. In order to cope with the challenges of handling new technologies, materials and methods, we have to develop human resources having appropriate professional knowledge, skills and attitude. Technical education system is one of the significant components of the human resource development and has grown phenomenally during all these years. Now it is time to consolidate and infuse quality aspect through developing human resources, in the delivery system. Polytechnics play an important role in meeting the requirements of trained technical manpower for industries and field organizations. The initiatives being taken by the Technical Education, UP to revise the existing curricula of diploma Programs as per the needs of the industry and making them NSQF compliant, are laudable.

In order to meet the requirements of future technical manpower, we will have to revamp our existing technical education system and one of the most important requirements is to develop outcome-based curricula of diploma Programs. The curricula for diploma Programs have been revised by adopting time-tested and nationally acclaimed scientific method, laying emphasis on the identification of learning outcomes of diploma Program.

The real success of the diploma Program depends upon its effective implementation. However, best the curriculum document is designed, if it is not implemented properly, the output will not be as expected. In addition to acquisition of appropriate physical resources, the availability of motivated, competent and qualified faculty is essential for effective implementation of the curricula.

It is expected of the polytechnics to carry out job market research on a continuous basis to identify the new skill requirements, reduce or remove outdated and redundant courses, develop innovative methods of course offering and thereby infuse the much-needed dynamism in the system.

Manoj Kumar
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Kanpur

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Coordinator
IRDT Kanpur

1. SALIENT FEATURES OF P. G. Diploma Programme in Fashion Technology

1)	Name of the Programme	:	P. G. Diploma Programme in Fashion Technology
2)	Duration of the Programme	:	One year (Two Semesters)
3)	Entry Qualification	:	Graduate in Any Discipline NSQF Level as Prescribed by State Board of Technical Education, UP
4)	Intake	:	60 (or as prescribed by the Board)
5)	Pattern of the Programme	:	Semester Pattern
6)	NSQF Level	:	Level - 8
7)	Ratio between theory and	:	35: 65 (Approx.)

8) Student Centered Activities:

A provision of 3-6 periods per week has been made for organizing Student Centered Activities for overall personality development of students. Such activities will comprise of co–curricular activities such as expert lectures, self-study, games, hobby classes like photography, painting, singing etc. seminars, declamation contests, educational field visits, NCC, NSS and other cultural activities, disaster management and safety etc.

9) Project work

A project work has been included in the curriculum to enable the student get familiarize with the practices and procedures being followed in the industries and provide an opportunity to work on some live projects in the industry.

2. EMPLOYMENT OPPORTUNITIES OF DIPLOMA HOLDERS IN P.G. Diploma Programme in Fashion Technology

A. Employment Opportunities:

1. Teaching Institute – ITI, RVTI, Polytechnic and Colleges High school and Inter School.
2. Examiners for skill development programmes.
3. T.V. serials, dramas, plays, advertisement, movies, etc.
4. Modelling and Fashion shows.
5. Garment manufacturing units, export houses.
6. Ordinance factories etc.
7. Buying and Design house.
8. Sales and promotions of garments and accessories.
9. Stylist, quality inspectors, fashion illustrators, merchandisers.
10. Pattern makers and Designers.

Industry:

1. Fashion Industry
2. Textile Industry
3. Garment Industry
4. Leather and Goods Industry
5. Accessory Industry
6. Boutiques
7. Online E-Commerce
8. Ordinances Factories
9. Retail Market of the Fashion Industry

Self-Employment:

1. Job Work
2. Boutiques
3. Exhibition and sales
4. Smart scale cottage industry for making simple garments and accessories.
5. Making Uniforms for Schools, Dresses for functions, Linen for Hospitals etc.

3. LEARNING OUTCOMES OF THE PROGRAMME

Sr. No.	Learning Outcomes
After due completion of the course, a P.G. diploma holder in Fashion Technology will be able to:	
1.	Communicate effectively in the field of Fashion Accessories and Design.
2.	Able to apply basic elements of designs.
3.	Able to apply basic principles of designs.
4.	Prepare designs for clients.
5.	Design outfits based on different periods of history.
6.	Designing for T.V. shows, plays, movies and drama, etc.
7.	Appropriate knowledge of colour schemes according to occasions.
8.	Able to draft garments according to design.
9.	Able to fabricate garments according to designs.
10.	Able to design fashion accessories.
11.	Able to design costume jewellery.
12.	Full knowledge of different embroidery of Indian states and their application.
13.	Knowledge of embroidery stitches and their variations.
14.	Designing variation of outfits and different stages of life.
15.	Fabrication of outfits in different stages of life
16.	Quality control of garments
17.	Full knowledge of fabric identification.
18.	Full knowledge of fabric dyeing.
19.	Full knowledge of fabric printing techniques.
20.	Full knowledge of fabric yarn and fabric constructions.
21.	Full knowledge of fabric stain removals.
22.	Designing for events like marriages, etc.
23.	Knowledge of good fits in garments and their alterations.
24.	Knowledge of computer designing.

25.	Basic knowledge of E Commerce.

4. DERIVING CURRICULUM AREAS FROM LEARNING OUTCOMES OF THE PROGRAMME

The following curriculum area subjects have been derived from learning outcomes:

Sr. No.	Learning Outcomes	Curriculum Areas/Subjects
1.	Communicate effectively in the field of Fashion Accessories and Design. Able to apply basic elements of designs. Able to apply basic principles of designs. Appropriate knowledge of colour schemes according to occasions.	Fashion General Knowledge
2.	Able to draft garments according to design.	Drafting & Pattern Making
3.	Prepare designs for clients. Design outfits based on different periods of history. Designing for T.V. shows, plays, movies and drama, etc. Designing variation of outfits and different stages of life.	Dress Designing
4.	Full knowledge of different embroidery of Indian states and their application.	Embroidery
5.	Full knowledge of fabric identification. Full knowledge of fabric dyeing.	Textile Science
6.	Able to fabricate garments according to designs. Fabrication of outfits in different stages of life Knowledge of good fits in garments and their alterations.	Garment Fabrication
7.	Knowledge of computer designing. Basic knowledge of E Commerce.	Computer Basics & CAD
8.	Knowledge about the working of the garment Industry Mass production process	Apparel Industry & Production Management

	Quality control of garments Level of automation in the Apparel Industry	
9.	Able to design fashion accessories. Able to design costume jewellery.	Jewelry & Fashion Accessories and Leather Goods
10.	Design and fabricate custom made garments Designing for events like parties, marriages, conferences, etc.	Project

5. Abstract of Curriculum Areas

(a) **Basic and Advance Courses**

- Fashion General Knowledge
- Drafting & Pattern Making
- Dress Designing
- Embroidery
- Textile Science
- Garment Fabrication
- Computer Basics & CAD
- Apparel Industry & Production Management
- Jewelry & Fashion Accessories and Leather Goods

(b)Project

1. Project work

6. HORIZONTAL AND VERTICAL ORGANISATION OF THE SUBJECTS

Sr. No.	Subjects	Distribution in Periods per week in Various Semesters	
		I	II
1.	Fashion General Knowledge	10	-
2.	Drafting & Pattern Making	11	
3.	Dress Designing	8	
4.	Embroidery	8	-
5.	Textile Science	10	-
6.	Garment Fabrication		12
7.	Computer Basics & CAD		10
8.	Apparel Industry & Production Management		10
9.	Jewelry & Fashion Accessories and Leather Goods		8
10.	Project		6
11.	Student Centered Activities	1	2
Total		**48**	**48**

7. STUDY AND EVALUATION SCHEME FOR a P.G. diploma holder in Fashion Technology

FIRST SEMESTER

Sr. No.	SUBJECTS	STUDY SCHEME Periods/Week			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
						INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
		L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
1.1	Fashion General Knowledge	4	-	6	4	20	30	50	50	2 ½	60	3	110	160
1.2	Drafting & Pattern Making	3	-	8	4	-	30	30	-	2 ½	60	4	60	90
1.3	Dress Designing	2	-	6	5	-	25	25	-	2 ½	50	4	50	75
1.4	Embroidery	2	-	6	5	-	30	30	-	2 ½	60	4	60	90
1.5	Textile Science	4	-	6	2	20	20	40	50	2 ½	40	3	90	130
#Student Centered Activities (SCA)		-	-	1	1	-	30	30	-	-	-	-	-	30
Total		**15**	**-**	**33**	**21**	**40**	**165**	**205**	**100**	**-**	**270**	**-**	**370**	**575**

Student Centered Activities will comprise of co-curricular activities like extension lectures, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities and self-study, etc.

SECOND SEMESTER A P.G. DIPLOMA HOLDER IN FASHION TECHNOLOGY

Sr. No.	SUBJECTS	STUDY SCHEME Periods/Week			Credits	MARKS IN EVALUATION SCHEME								Total Marks of Internal & External
						INTERNAL ASSESSMENT			EXTERNAL ASSESSMENT					
		L	T	P		Th	Pr	Tot	Th	Hrs	Pr	Hrs	Tot	
2.1	Garment Fabrication	4	-	8	4	20	30	50	50	2 ½	60	3	110	160
2.2	Computer Basics & CAD	4	-	6	3	20	30	50	50	2 ½	60	3	110	160
2.3	Apparel Industry & Production Management	7	-	3	5	20	20	40	50	2 ½	40	4	90	130
2.4	Jewelry & Fashion Accessories and Leather Goods	1	-	7	5		30	30			70	4	70	100
2.5	Project	-	-	6	2	-	50	50		-	100	-	100	150
#Student Centered Activities (SCA)		-	-	2	1	-	30	30	-	-	-	-	-	30
Total		**16**	**-**	**32**	**20**	**60**	**190**	**250**	**150**	**-**	**330**	**-**	**480**	**730**

Student Centered Activities will comprise of co-curricular activities like extension lectures, games, hobby clubs e.g. photography etc., seminars, declamation contests, educational field visits, N.C.C., NSS, Cultural Activities and self-study etc.

8. GUIDELINES FOR ASSESSMENT OF STUDENT CENTRED ACTIVITIES (SCA)

It was discussed and decided that the maximum marks for SCA should be 30 as it involves a lot of subjectivity in the evaluation. The marks may be distributed as follows:

i. 10 Marks for general behavior and discipline
(by HODs in consultation with all the teachers of the department)

ii. 5 Marks for attendance as per following:
(by HODs in consultation with all the teachers of the department)

a)	75 - 80%	2 Marks
b)	80 - 85%	4 Marks
c)	Above 85%	5 Marks

iii. 15 Marks maximum for Sports/NCC/Cultural/Co-curricular/ NSS activities as per following:
(by In-charge Sports/NCC/Cultural/Co-curricular/NSS)

a)	15	-	State/National Level participation
b)	10	-	Participation in two of above activities
c)	5	-	Inter-Polytechnic level participation

Note: There should be no marks for attendance in the internal sessional of different subjects.

I Semester

1.1 Fashion General Knowledge

L	T	P
4	-	6

RATIONALE

Importance of the paper lies in the fact that it enables the student to develop a proper concept of fashion and its trends.

LEARNING OUTCOMES

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

1. Communicate effectively in the field of Fashion Accessories and Design.
2. Understand the finer aspects of the elements and principles of Design
3. Appropriate knowledge of colour, its application of Garments according to client and occasions

DETAILED CONTENTS

1. INTRODUCTION: (08 Periods)

   Fashion, Fashion classification & types. Fashion Design & Fashion technology. Why Fashion? How to keep in touch with latest fashion? Selecting Fashion for own self. Fashion Industry & its Scope. Fashion Illustration & Application.

2. FASHION TERMINOLOGY: (08 Periods)

   Acquainting with Fashion terminology. Fashion industry language guide. Dictionary of Fashion terms.

3. WAXING & WANING OF FASHIONS: (06 Periods)

   Causes. Fashion occasions in social life, formal gatherings, Fashion cycle.

4. ELEMENTS OF DESIGN:
   (A) Elementary Knowledge of tools and equipment. (02 Periods)

   (B) Dots, Lines-thick, thin, straight, curved, wavy, vertical, horizontal & diagonal. (02 Periods)
   Shapes- Natural- Leaves, Flowers, Fruits, Vegetables
   Birds, etc., Man Made and Geometrical Shapes
   Forms - 3 dimensional shapes, make compositions to create designs with shapes and forms.

5. PRINCIPLES OF DESIGN: (08 Periods)
   Proportion, Harmony, Relationship, Contrast, Balance, Variety, Unity & Rhythm in design.

6. ELEMENTS OF COLOURS: (10 Periods)

Colours - Hue, Value and Intensity Colours wheel and colour schemes- Triadic analogous, complimentary, warm and cool.

7. MEDIUM OF EXPRESSION: (06 Periods)

(A) Pencils, Oil pastels, Water colours.

(B) PRACTICE OF FOLLOWING ARTS FORMS IN COLOUR -Traditional & Modern, Folk & Geometrical

8. INTRODUCTION TO NEGATIVE & POSSITIVE SPACE: (06 Periods)

Space value, Geometrical designs showing Negative & Positive space.

LIST OF PRACTICALS

Practical's based on theory

1. Create 15 sheets (on 1/4 cartridge) on elements and principles of Basic Design.
2. Create 15 sheets (on 1/4 cartridge) on colour.
3. Create 5 sheets (on 1/4 cartridge) on +ve and -ve space, traditional and modern and folk art.

INSTRUCTIONAL STRATEGY

The subject requires both theory and practical emphasis simultaneously, so that the student can understand the practical significance of the various areas. Visits to Fashion industries must be carried out, so as to make the students can understand where and how the various instruments are used in the industry.

MEANS OF ASSESSMENT

- Assignments and quiz/class tests
- Mid-term and end-term written tests
- Model making
- Actual practical work
- Viva-Voce

RECOMMENDED BOOKS

1. All Colour Encyclopedia, Publication: Cathay Books
2. Colour by Quant Publication Octopus Books
3. Encyclopedia of Fashion Details by Patrick John Ireland, Publication: B. T. Batsford Ltd London

Websites for Reference:

1. www.fashionglamourinfo.blogspot.com
2. www.glamour.com

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Periods)	Marks Allotted (%)
1	08	15
2	08	15
3	06	10
4	04	08
5	08	14
6	10	18
7	06	10
8	06	10
Total	**56**	**100**

1.2 DRAFTING AND PATTERN MAKING

L	T	P
3	-	8

Rationale:

This paper will make students familiar with human anatomy, measurement methods, measurement charts, difference between paper pattern and drafting, figure types and figure defects. The student will also be equipped with the knowledge of operation of equipment's used in drafting.

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

1- Have full knowledge of drafting terms.
2- Make drafts and patterns of different garments and designs for child and ladies.
3- Do Pattern Layouts along with estimation and costing of garments.
4- Cover figure defects through illusion of drafting and design.

Note: Explanation of Introductory part should be demonstrated with practical work. Following topics may be explained in the laboratory along with the practical exercises. There will not be any theory examination.

DETAILED CONTENTS

1. Scope and importance of drafting, drafting terminology, Drafting tools and equipment. (02 Periods)

2. PATTERN MAKING: (02 Periods)

Different types of pattern, Converting of draft into pattern. Importance of pattern, Difference between paper pattern and drafting.

3. HUMAN ANATOMY: (02Periods)

Study of human body with reference to Skelton, muscles, joints, organs, growth of body, various facts to consider in making of garments.

4. MEASUREMENT METHODS: (02Periods)

Various methods of taking measurements on the body. Taking measurements of over garments. Sequence of recording measurements.

5. MEASUREMENT CHARTS/ANTHROPOMETRY: (02 Periods)
Study of measurement charts, study of human proportions, Different figure type and defects, Eight head theory its principle and application.

6. Draft the child's bodice. Types of Sleeves and types of collars. (06 Periods)

7. Draft Ladies bodice, Plain Sleeves, Types of Skirts. (06 Periods)

8. Draft for Kids Wear-Baby frock, Jump Suit, Boy's Shirt, Knickers, Night wears, Skirt, Top. (04 Periods)

9. Draft for Ladies wear- Saree blouse, Salwar Kameez, Churidar, Anarkali suit. (04Periods)

10. Dart for Gents Wear- Gents Shirt, Aligarhi Pajama Trouser. (04Periods)

11. Elimination of darts and insertion of fullness through pleats, tucks, gather's, etc. (04Periods)

INSTRUCTIONAL STRATEGY

Since this subject is practice oriented, the teacher should demonstrate the capabilities of Drafting to students while doing practical exercises.

MEANS OF ASSESSMENT

- Model/ Pattern making
- Actual practical work
- Viva-Voce

RECOMMENDED BOOKS

1. Zarapkar System of Cutting by Shri K. R. Zarapkar, Publication: Navneet Publications.
2. Pattern Grading for Women's Clothing by Gekey Cooklins, Publication: Blackwell Science
3. Rapidex Home Training Course by Asha Rani Vohra, Publication: Pustak Mahal
4. Encyclopedia of Dress Making by Marshall Cavendish Marshall Cavendish Books Ltd. 58 Old Cambton Street .
5. Basic Fashion by Wardrobe Pamelalee Singer Co,.(U.K.) Ltd.
6. Dress Making Ronkelty Terry Evon Himalayan Publishing Group LTd. Landon

Websites for Reference:

1. www.textileschool.com
2. www.clothingindustry.blogspot.com

1.3 DRESS DESIGNING

L	T	P
2	-	6

Rationale:

Designing is the first activity in the process of manufacturing a product. For garment making too designing is equally important. This paper deals specially with men, women and kid's wears. Due use of computers in these exercises may be emphasized.

LEARNING OUTCOMES

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

1- Designs Garments and outfits for men, women and kids for any occasion
2- Do illustrations of designs
3- Understand the type and print of fabric suitable for a particular design
4- Able to design garments made of leather and knitted fabrics
5- Interpret Design illustrations for fabrication purposes

Note:

Explanation of Introductory part should be demonstrated with practical work. Following topics may be explained in the laboratory along with the practical exercises. There will not be any theory examination.

DETAILED CONTENTS

Introduction of dress design, fashion & style and different dress materials.

Preparation of a file (1/4 imperial size): -

1. Line sketches of human figures (Gents, ladies and children) with pencil or ink, Introduction of dress designing, fashion style and different dress materials. Sketch different types of neck lines, collars, sleeves, yokes, tie, bows, etc. with ink. (02Periods)

2. Sketch following garment designs (Boys & Men) in different mediums (ink, pencil, water colour, poster colour) and write special features of the dress and suitable fabric material & clothing accessories. (02Periods)

(i) CASUAL WEAR: Design different types of casual dresses according to different age groups, seasons and climate with the use of different types of fabric prints, checks, textures etc. (02Periods)

(ii) PARTY WEAR:
Design different types of dresses for parties, Festival- party, Cocktail-party, Marriage-party) for different age groups. (02 Periods)

(iii) SPORTS WEAR: Design different types of sports dresses (Tennis, Jogging, Swimming, Horse riding, Sailing Cricket) for different age groups. (02 Periods)

(iv) UNIFORM WEAR: Sketch various design related to office, school and industrial wears. (02Periods)

3. Sketch different types of pockets, plackets, belts with ink. (02Periods)

4. Story board development (04 Periods)

   (i) Colour presentation

   (ii) Verbal presentation

5.MARKET RESEARCH -
Design identification, development of strong Leather garment theme. (02 Periods)

6. Design projects for various garment categories. (04 Periods)

   (i) Leather (ii) Textile (iii) Knit (v) Embroidery

7. Interpretation of drawings into garments by various pattern techniques. (02Periods)

8. Visual and verbal analysis and assessment of finished garments. (02 Periods)

INSTRUCTIONAL STRATEGY

Since this subject is practice oriented, the teacher should demonstrate practical significance of the various areas. Visits to Fashion industries must be carried out, so as to make the students can understand where and how the various instruments are used in the industry.

MEANS OF ASSESSMENT

- Model/ Pattern making
- Actual practical work
- Viva-Voce

RECOMMENDED BOOKS

1. Innovative Fashion Sketching by Rita Gerstel, Publication: Innovative Enterprises
2. Rendering Fashion Fabrics & Prints by Steve Greenberg, Publications: M. Kathleen Colussy.
3. Fashion Drawing Design, by Supoj Anantakal, Publication: Wongswang Press Co. Ltd,

Websites for Reference:

1. www.wikihow.com
2. www.en.wikipedia.org

1.4 EMBROIDERY

L	T	P
2	-	6

Rationale:

Embroidery is a process of adding design and decoration to the fabric surface. It holds significant importance in fashion wears for children and women, so it cannot be ignored in fashion designing curriculum.

LEARNING OUTCOMES

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

1- Create embroidery patterns
2- Fully recognize different Indian state embroideries
3- Use embroidery stitches and patterns to enhance garment designs
4- Trace and transfer embroidery patters on fabric

Note: Lecturer/Demonstration will go along followed by practice during practical periods. At least 20 exercises (Patterns) of different kinds relevant topics in the paper. Student should be given demonstration of these exercises on computer also. There will not be any theory examination.

DETAILED CONTENTS

1. Introduction of the appropriate tools, machines and materials for hand and machine embroidery work. (02 Periods)
2. Knowledge of tracing design on various types of embroidery materials. (04 Periods)

EMBROIDERY:

Prepare a file of the following embroidery samples with their characteristics, special features and uses.

3. HAND EMBROIDERY: (04Periods)

Basic stitches (Including variations) - stem stitch, Back stitch, Chain stitch, Buttonhole stitch, Satin, stitch, Long & Short stitch, Herringbone stitch, French knots, Couching, Darning-stitch, Feather-stitch, Cross- stitch.

4. FANCY EMBROIDERY WORK: (06 Periods)

(a) Applique work (Blind, Net, lace, figure appliques)
(b) Patch work (c) Bead work (d) Ribbon work (e) Punch work
(f) Laid work (g) Zari work (h) Shadow work (i) Quilting
(j) Smocking

5. TRADITIONAL INDIAN EMBROIDERY: (06 Periods)

(a) Kashmiri (b) Phulkari
(c) Chicken Kari (d) Sindhi mirror embroidery

(e) Kantha (f) Miscellaneous Embroidery

INSTRUCTIONAL STRATEGY

Since this subject is practice oriented, the teacher should demonstrate practical significance of the various areas. Visits to Fashion industries must be carried out, so as to make the students can understand where and how the various instruments are used in the industry.

MEANS OF ASSESSMENT

- Model/ Pattern making
- Actual practical work
- Viva-Voce

RECOMMENDED BOOKS

1. Good House Keeping- Step-by-step Encyclopedia of needle craft by Judy Brittain Publication Darling Kindersley Ltd.
2. Dictionary of Stitches by Sheila Brull, Publication: Canvendish House
3. Embroidery in Fashion by Annwen Nicholas and Daphane Teague, Publication Pitam Publishing

Websites for Reference:

1. www.embroiderydesignsforfree.com
2. www.sewguide.com/hand-embroidery-stitches

1.5 TEXTILE SCIENCE

L	T	P
4	-	6

Rationale:

A diploma holder in Fashion Designing, has to interact with skilled labor on one hand and he/she has to assist his/her seniors in the procurement of raw materials and various types of fabrics on the other. Therefore, he/she should be equipped with the technique of selecting textile and synthetic fibers by visual inspection and laboratory tests, processing of fabrics, dyeing of fabrics etc.

LEARNING OUTCOMES

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

1- Identify and differentiate between different kinds of fibres.
2- Dye fabrics and yarns
3- Print on Fabrics with different designs
4- Create exclusive patterns with Tie & Dye & Batik Techniques

DETAILED CONTENTS

1. Textile Fibres **(10 Periods)**

1.1 Classification of textile fibres and their general & essential properties and their use.
Natural fibres: - Animal, Vegetable, Mineral, Bast Fibres
Man-made Fibres: -
(a) Regenerated fibers. - Rayon (Viscose, Acetate, Cupra ammonium)
(b) Synthetic fibers- Nylon, Polyester (Terelene /Dacron), Acrylic (Orlon)

1.2 **Identification of textile fibres**

1.2.1 Visual inspection
1.2.2 Burning test
1.2.3 Chemical test (elementary)
1.2.4 Elementary knowledge of blends

2. Elementary Knowledge of Knitting: **(06 Periods)**

2.1 Knitting Terminology- Terms related to hand and machine knitting and knitting software

2.2 Hand Knitting - Basic stitches, Finishing.
2.3 Machine knitting – circular Knitting and Flat knitting

3. Woven Fabric Construction **(10 Periods)**

3.1 Classification of woven fabrics
3.2 Elementary knowledge of different processes involved in the conversion of yarn into fabric.
3.3 Weaves.
(ii) Types of weaves Simple weaves - Plain, Twill, Satin and Sateen

4. Study of different commercial fabrics on the basis of: **(10 Periods)**

4.1 Methods of manufacturing: weaving, (woven) (simple, compound, looped, tufted, gauze,

leno etc.) and knitting (knitted) (weft knitted, warp knitted etc.)

4.2 Structure (weave): plain (Long cloth, Poplin, Rubbia, Casement, Cambric, Voile, Mulmul, Buckram etc.), Twill (Drill, Denim, Jean, Tweed, Serge, Gaberdine etc.).

4.3 Quality and Construction: (Coarse, Medium, Fine, Superfine, Based on EPI, PPI, Count & ply of wrap and weft yarn)

4.4 Weight, Light, Medium, Heavy.

4.5 Level of ornamentation: Dyed, Stripe, Check, Figured-Tapestry, Brocade, Damask and Printed.

4.6 Use: Shirting, Suiting, Lining, Dress Material, Bed cover, Table cover, Curtain, Furnishing, Upholstery etc.)

5. Dyeing **(12 Periods)**

5.1 Classification of dyes

a: Natural Dyes

- Vegetable - Animal - Mineral

b: Synthetic dyes

- Acetate - Acid - Basic
- Pigments - Different types of dyeing methods

c: Ecofriendly dyes

5.2 Batik

5.3 Tie and dye

5.4 Factors which effect fading of dyed fabrics

(i) Light (ii) Humidity (iii) Perspiration
(iv) Gas fumes (v) Laundering (vi) Heat

6. Surface Designs of fabrics **(08 Periods)**

6.1 Printing

a- Vegetable printing b- Block printing c- Screen printing

LIST OF PRACTICALS

Practical's based on theory

1. Identification of fibres. (Natural & Manmade fibres)

2. Study of different types of commercial fabrics and their sample collection.

3. Study of fabric structure to identify basic weaves.
4. Study of fabric count (Weight of fabric) and comfort properties (Drape, Bending, crease recovery, air permeability, abrasion fabric thickness, elongation)
5. Exercises in proper selection of fabrics for any given garment or style.
6. To prepare an article in
   - Batik - Tie and dye - Block printing - Screen printing
7. Stencil or spray along with Transfer printing.
8. To visit cloth manufacturing factories and prepare a report.

INSTRUCTIONAL STRATEGY

The subject requires both theory and practical emphasis simultaneously, so that the student can understand the practical significance of the various areas. Visits to Fashion industries must be carried out, so as to make the students can understand where and how the various instruments are used in the industry.

MEANS OF ASSESSMENT

- Assignments and quiz/class tests
- Mid-term and end-term written tests
- Model making
- Actual practical work
- Viva-Voce

RECOMMENDED BOOKS

1. Vastra vigyan Avam Paridhan by Dr. Pramilla Verma, Publication: Rajhans Press Publications
2. Textile Fibre & Fabric by M. David Poter, Publication Haryana Sahitya Academy.
3. Fundamentals of Textiles and their Care (Fourth Edition) Vol 1 & 2 by Susheela Dantyagi, Publication: Orient Longman.

Websites for Reference:

1. www.en.wikipedia.org
2. www.britannica.com

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Periods)	Marks Allotted (%)
1	10	18
2	06	10
3	10	18

4	10	18
5	12	20
6	08	16
TOTAL	56	100

II Semester

2.1 GARMENT FABRICATION

L	T	P
4	-	8

Rationale: The knowledge of how fabric is cut and garments constructed is very important for a fashion designer. Designs made are 2-dimensional while garments constructed are to fit a 3-dimensional figure. This gap is bridged with the knowledge of stitching. To understand how mass production is done in Industries, it is important to know how single garment production is done.

LEARNING OUTCOMES

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

1- Have full knowledge of the working of sewing machines
2- Have full know how of the different types of stitches used for making a garment
3- Stitch all types of kids and women wear garments
4- Address and resolve all types of fitting problems.

DETAILED CONTENTS

1. Sewing tools and equipment- Introduction to sewing machine, Machine parts, their function, oiling, Machine maintenance, Machine defects and remedies. Threading of Machine. Other sewing tools - Needles, Pins, thimble, Ruler, Measuring tape, etc. (08 Periods)

2. Basic hand Stitches - Basting (Even and Uneven) Hemming, Invisible Hemming Prick, Back, Half Back Overhand, Herringbone. (04 Periods)

3. Basic Machine Stitches - Seams-Plain, Fell, Double Fell, Lap, French, Interlocking, over locking, Pipping, Facing. (04Periods)

4. Different types of Placket opening - Continuous, 2 piece, Placket, Kurta and Zip. (04 Periods)

5. Necklines - Necking necessity, stitches, trimming used for different shape, Finishing of neckline. (04Periods)

6. Collars -Types of collars, Selection of stiches, Precautions for different types of collars. (04Periods)

7. Sleeves - Types of sleeves, method of fabrication, precaution in fabrication. (04 Periods)

8. Yokes and Pockets - Types and positioning of yokes and pockets, Precautions in stitching. (04Periods)

9. Darts, Tucks and Pleats - Importance of darts, Tucks and pleats for proper fitting, their use in different garments, Precautions to be taken. (04Periods)

10. Lining and Inter lining - Necessity of lining and interlining, Methods of attaching with different types of garment, Matching of lining. (04 Periods)

11. Cuffs - Precautions and necessity of fixing of cuffs. (04 Periods)

12. Skirts - Types of skirts, methods of fabrication, Precaution in fabrication. (04 Period

13. Importance of Fitting - Importance of fitting, checking for fitting on figures. Alterations to be done for correct fitting. (04 Periods)

LIST OF PRACTICALS

1. Make a practical file with basic hand stitches, machine stitches, pleats, tucks, openings, pockets, cuffs, belt, darts, facing and piping.

2. Fabricate the following garments- Baby frock, Jumpsuit, Skirt & Top, Sari blouse, Salwar Kameej, Plazzo, Gent's Kurta Pajama, Knickers and Boy's Shirt.

INSTRUCTIONAL STRATEGY

The subject requires both theory and practical emphasis simultaneously, so that the student can understand the practical significance of the various areas. Visits to Fashion industries must be carried out, so as to make the students can understand where and how the various instruments are used in the industry.

MEANS OF ASSESSMENT

- Assignments and quiz/class tests
- Mid-term and end-term written tests
- Model making
- Actual practical work
- Viva-Voce

RECOMMENDED BOOKS

1. Cutting Tailoring & Fashion Science by Vimla Saxena, Publication: Arihant Publishers
2. Cutting & Tailoring Course by Gayatri Devi Verma, Publications: Asian publications
3. Tailoring, Cutting & Fashion Designing by G. L. Tamta, Publication: Dhanpat Rai & Co.

Websites for Reference:

1. www.textileschool.com
2. www.textilelearner.blogspot.com

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Periods)	Marks Allotted (%)
1	08	14
2	04	7
3	04	7
4	04	8
5	04	7
6	04	7
7	04	7
8	04	7
9	04	7

10	04	8
11	02	7
12	02	7
13	02	7
TOTAL	28	100

2.2 COMPUTER BASICS & CAD

L	T	P
4	-	6

Rationale:

Computer has great influence on all aspects of life. Primary purpose of using computer is to make the life easier. Almost all work places and living environment are being computerized. The subject introduces the fundamentals of computer system for using various hardware and software components. In order to prepare diploma holders to work in these environments, it is essential that they are exposed to various aspects of technology such as understanding the concept Computer Aided Designing and its scope. This exposure will enable the students to enter their professions with confidence, live in a harmonious way and contribute to the productivity.

LEARNING OUTCOMES

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

1- Know about Basic Computers
2- Design vector based designs on Computers
3- Be able to do fashion Illustrations and design development on computers.

DETAILED CONTENTS

1. Computer principles and application: Basic Fundamentals of computer hardware, Basic trend in PC Technology, Operating system (OS)- Definition, Types of OS, DOS, Window and Linux; Internet and E-Mail. (06 Periods)
2. Drafting and pattern making using INKSCAPE or any other Similar Open source software (10 Periods)
3. Fashion sketching and Designing using GIMP or any other similar software (12 Periods)
4. Editing images using GIMP (10 Periods)
5. Scanning and modifying by GIMP or Open source software (06 Periods)
6. Drawing basic design, stick figure, bodice block and flesh figures on INKSCAPE (12 Periods)

LIST OF PRACTICALS

Similar Types of Open Source Software can be used for practical purpose.

1. Demonstration of computer System
2. Demonstration of Various Operating System.
3. Introduction to features of INKSCAPE.
4. Creating a design layout in INKSCAPE.
5. Sketching in GIMP Tool.
6. Designing in GIMP Tool.
7. Editing an image in GIMP.
8. Drawing of Stick Figure in INKSCAPE
9. Drawing of Bodice block in INKSCAPE
10. Drawing of Flesh Figure in INKSCAPE

INSTRUCTIONAL STRATEGY

Since this subject is practice oriented, the teacher should demonstrate the capabilities of computers to students while doing practical exercises. The students should be made familiar with computer parts, peripherals, etc. and proficient in making use of Image Editing software functionalities. The student should be made capable of working on computers independently

MEANS OF ASSESSMENT

- Assignments and quiz/class tests, mid-term and end-term written tests
- Actual laboratory and practical work, exercises and viva-voce
- Software installation, operation, development and viva-voce

RECOMMENDED BOOKS

1. Fundamentals of Computer by E Balagurusamy,Tata McGraw Hill Education Pvt. Ltd, New Delhi
2. Fundamentals of Computer by V Rajaraman; Prentice Hall of India Pvt. Ltd., New Delhi
3. The Definitive Guide to the Free Graphics Editor by Dmitry Kirsanov, Publication No Starch Press, 2009 - Art
4. Beginning Photo Retouching & Restoration Using GIMP by Phillip Whitt, Publication: Apress/2014
5. Rapidex Computer Course by Pustak Mahal Editorial Board

Websites for Reference:

1. www.inkscape.org
2. https://en.wikipedia.org/wiki/GIMP

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Periods)	Marks Allotted (%)
1	6	10
2	10	18
3	12	22
4	10	18
5	06	10
6	12	22
Total	56	100

2.3 APPAREL INDUSTRY & PRODUCTION MANAGEMENT

L	T	P
7	-	3

Rationale:

A fashion technologist involved in dress making should have idea of market, readymade garments industry and its scope, strength and threats to it. He should be able to control the industry's managerial and technological aspects. The paper aim to fulfill this objective.

LEARNING OUTCOMES

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

1- Understand the different ways in which the fashion industry operates
2- Handle work pressures in a better manner
3- Have full knowledge of the working of different departments in a garment manufacturing unit

DETAILED CONTENTS

1) ORIGIN OF APPAREL INDUSTRY (16 Periods)

- Strength, weakness, threats and opportunities to industry.
- Present status of industry.
- Types of manufacturing system -
    * Subcontract
    * Whole garment
    * Assembly

2) CUTTING ROOM PLANNING: (16 Periods)

Planning, cutting, sorting, conditions for cutting room layout, manpower, machines, tools and equipment.
Marker making, Marker mode.
Spreading Techniques,
Symmetry, asymmetry of fabrics and garments.
Different types of fabrics and special care to be taken for spreading and cutting, sorting, bundling.
Inventory Control.

Lab Sessions.

Project - cutting room analysis, cutting room layout, cut plans.

3) SEWING PRODUCTION MANAGEMENT: (16 Periods)

* Stitch classifications, seams and their effect on elasticity, strength, slippage.
- Definition
- Time and motion study
- Importance of time and motion study
- Fatigue, delays, effect on efficiency

- Output
- Using video cassettes for time & motion study.
- For quality and quantity analysis
- Documentation, control forms
- Flow charts.
- Production control systems.
- Definition, types, criteria, planning and layout.

Lab Session: Study of lockstitch machine, quality inspection of stitches on different fabrics

Project: Layout for assembly line and different machine analysis

4) FINISHING (16 Periods)

- Shaping
- Pressing, Processes, Equipments (Irons, Presses, others)
- Qualitative and quantitative analysis
  Control.
- Removal of different stains.

5) COST AND COST CONTROL (12 Periods)

- Definition, types and expenses.
- Production cost control and cost reduction.
- Break even & charts.

6) QUALITY CONTROL (12Periods)

- Definition, scope.
- Establishing Raw material quality control and their procedure.
- Establishing processing quality control and their procedure.
- Quality control for finished garments.
- Quality control for packaging.
- Industry wide quality standards.
- Standards and specifications, ISO inspection methods, different types of quality control.

7) COMPETITION AND AUTOMATION FOR APPAREL MANUFACTURING (10 Periods)

Introduction, side by side we will see use of automation in the industry and its various aspects like cutting, sewing, finishing etc.

8- FACTORY VISIT

LIST OF PRACTICALS

1. Visit to an Export house or manufacturing unit.

2. Make ten samples showing different SPI
3. Depict different ways in which fabric is folded for cutting
4. Prepare a project report in the fashion industry visit including factory layout and details of different department.

INSTRUCTIONAL STRATEGY

The subject requires both theory and practical emphasis simultaneously, so that the student can understand the practical significance of the various areas. Visits to Fashion industries must be carried out, so as to make the students can understand where and how the various instruments are used in the industry.

MEANS OF ASSESSMENT

- Assignments and quiz/class tests
- Mid-term and end-term written tests
- Model making
- Actual practical work
- Viva

RECOMMENDED BOOKS

1. Fashion Marketing by Mike Easey, Publication Blackwell
2. Fashion Marketing & Merchandising by Manmeet Sodhia & Pooja Chatley, Publication: Kalyani Publications.
3. Clothing Technology by Verlag Europa Lehrmittel, Publications: Nourney, Vollmer Gmbh & Co.

Websites for Reference:

1. https://textilestudycenter.com/
2. https://www.onlineclothingstudy.com/

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Periods)	Marks Allotted (%)
1	16	16
2	16	16
3	16	16

4	16	16
5	12	14
6	12	14
7	10	10
TOTAL	98	100

2.4 JWELLERY AND FASHION ACCESSORIES and LEATHER GOODS

L	T	P
1	-	7

Rationale:

Changes in designs of apparel, jewelry and fashion accessories keep the fashion vibrant and dynamic. Their demand in society is always in unison with the pace of changes. Jewelry and fashion accessories and their designing are well established professions. Due use of computer in development of designs be emphasized.

Note:

Lecturer/Demonstration will go along together. Importance to practical during the session is to be appreciated. Due use of computer in development of designs be emphasized. There will not be any theory examination.

LEARNING OUTCOMES

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

1- Design costume jewelry
2- Have an understanding of precious and semiprecious stones
3- Will be able to make wearable artificial jewelry using different materials which can be sold in the market.
4- Design and fabricate accessories for outfits.

DETAILED CONTENTS

1. BASICS: (02 Periods)
   Jewels- their shapes. Forms and types. Techniques. Creations. Inspiration.
   Elements - Studded gold, plain gold, and other metals.

2. GEMS IDENTIFICATION: (02Periods)

   Cuts, Sizes, shapes, using different identification techniques.

3. JWELLERY: Accessories, styles and their creative uses. Preparation and collection of design and their analysis. (02 Periods)

4. FASHION ACCESSORIES: (02Periods)

   Fashion leather and their creative uses Hats, Bags Shoes, Key Chain Umbrellas, Bags, Purses, Wallets, Prepare two articles of different Types of accessories.

5. STYLES OF FASHION ACCESSORIES: (02Periods)

   Styles and variation in Fashion accessories. Designing and orientation/various aspects of different fashion accessories. Materials used for Fashion Accessories, Suitability of fashion accessories according to figure type

6. Market surveys and Research for proper selection of accessories. (02Periods)
7. Prepare 5 sets of jewelry with 5 items using different materials (02Periods)

INSTRUCTIONAL STRATEGY

Since this subject is practice oriented, the teacher should demonstrate practical significance of the various areas. Visits to Fashion industries must be carried out, so as to make the students can understand where and how the various instruments are used in the industry

MEANS OF ASSESSMENT

- Model/ Pattern making
- Actual practical work
- Viva-Voce

RECOMMENDED BOOKS

1. A Golden Treasure Jewelry from the Indian Subcontinent by Susan Stronge, Nima Smith & J. C. Harle, Publication: Victoria & Albert Museum
2. Masterpieces of Indian Jewelry by Jamila Brijbhushan, Publication: Tara P. Ravata.
3. Indian Costume Coiffure and Ornament by Sachinanand Sahay Publication: Munshiram Manoharlal
4. Jewelry Making Manual by Sylvia, Publication: Mac Donald

Websites for Reference:

1. https://en.wikipedia.org/wiki/Fashion_accessory
2. www.jewelryinfoplace.com

2.5 PROJECT

L	T	P
-	-	6

Student will select the subject of their interest. It may be from any subject they have studied. But the final product must reflect the knowledge they have gained from each subject they have studied. Student will select a topic from any subject and prepare an outfit with full details of client profile, story board, colour board, fabrication and costing details. Accessories should also be included in the outfit.

They are required to undergo a 2-weeks job training and prepared a project report.

Prepare a project report on field visit to fashion industry including the layout of the factory and working details of the various departments

10. RESOURCE REQUIREMENT

10.1 PHYSICAL RESOURCES

(A) Space requirement

Norms and standards laid down by All India Council for Technical Education (AICTE) are to be followed to work out space requirement in respect of class rooms, tutorial rooms, drawing halls, laboratories, space required for faculty, student amenities and residential area for staff and students.

(B) Equipment requirement:

Following Laboratories are required for P. G. Diploma Programme in Fashion Technology:

1- TEXTILE FABRICS (DYEING & PRINTING HOUSE)
2- TEXTILE GARMENT SHOP
3- COMPUTER & CAD CENTRE
4- EMBROIDERY AND KNITTING SHOP
5- Textile Science Lab

EQUIPMENT REQUIRED FOR P. G. Diploma Programme in Fashion Technology

Sr. No.	Description	Qty	Rate	Total Price (Rs)
TEXTILE FABRICS (DYEING & PRINTING HOUSE)				
1	Dye Bath for Experimental Work	10	500	5000
2	Spray, Block and Screen Systems of Printing	10 Set	1000	10000
3	Spray Printing Machine with Compressor	01	450000	450000
4	Electrically Operated Lab Stirrers			
5	A. Fixed Type	10	15000	15000
6	B. Movable Type	10	15000	15000
7	Lab Model of Hank Dyeing Machine	05	5000	25000

NOTE: 1. Indian make working laboratory models for the costly equipment be purchased if available. 2. For facilities not available in the lab, frequent industrial visits for demonstration recommended				
TEXTILE GARMENT SHOP				
Pattern Making/Fabrication				
	Drafting Tables 1 X 1.5 Meters	30		300,000.00
	Stools	60		50000.00
	Thimble	60		6000
	Pressing Board	5		5000.00
	Dressing Mirror 4.5' X 1.5' (with frame & stand)	5		5000.00
	Squares Art, Plastic	30		5000
	Hangers General	12 Doz.		5000.00
	Hangers Wooden	30		4000.00
	L Squares 12" X 24" (Plastic, Celluloid)	30		10000.00
	Long Scale of 1 meter	30		3000.00
	Seam Openers	30		3000.00
	Shapers for upper and lower garments	60		10000.00
	Spray Gun (For removal of stains)	10		100000.00
	Electric Cutter	1		8000.00
	Electric Iron Press (automatic)	5		7500.00
	Dummies (Ladies, Gents & Children) Upper and Lower Sizes	30		300000.00
	Iron Press heavy	02		2000
	Steam press	02		5000.00
	Scissors 9", 10",11" (20+20+20)	60		10000.00
	Button hole scissors 8"	04		600.00
	Trimming Scissors 8"	4		500.00
	Picking Scissors 10"	4		500.00
	Display Board 6' x 4'	10		15000.00
	Pico machine	4		20000.00
	Interlocking Machine	02		10000.00
	Round Knife Machine	01		2500.00
	Misc Equipments. (viz Measuring Tapes, Tracing Wheels etc.)			25000.00

DRAWING HALL				
	Drawing Table with Board	60		4,80,000.00
	Set Squares	60		12,000.00
	Misc Equipment's	Lump sum		50,000.00
COMPUTER & CAD CENTRE				
	Core-2 Quad Processor, 4GB RAM 1 GB SATA HDD, 19" TFT Monitor OS-Windows 2007/2008/Latest Version	02 Server		1,20,000=00
	General Desktop Computer/Laptops-Intel i5 60 node or Higher, 2GB RAM, 320 GB SATA HDD, 17" TFT/LCD/LED Monitor, DVD Writer Multi Media Kit with Key Board- Multimedia, Mouse- Optical Scroll or Latest, 32 Bit PCI ETHERNET CARD (10/100) Mbps, Internet Modem, Pen Drive 16 GB, Pre loaded latest Anti Virus with Life time Subscription, License Media and Manual with UPS 660 VA OR Computer of latest Specification			36,00,000=00
Software :				
	i. MS OFFICE 2010	LS	LS	
	ii COMPILER 0 'C', C++, JAVA-7	LS	LS	
	iii. Adobe Photoshop, Corel Draw -Graphic Suite Corel Draw- Technical Suite, Adobe Photo Shop, Lectra, Reach, PPS, Reach CADD, Tukatech, Deco Studio Inkscape and Gimps Softwares	LS	LS	
	iv. Personal Web Server, HTML, IIS	LS	LS	
	Hardware	4,50,000.00	LS	
	i. Switch-32 Port	02		
	ii. Router	02		
	iii. Hub	04 (8 Port)		
	iv. Ext. Modem	02		
	v. Wireless N/W Adaptor	02		
	vi. Series Access Point	02		
	vii.LAN Cable Meter	05		
	viii. LAN Cable Analyzer	05		
	ix. Crimping Tool and all other accessories related to Networking	15		
	Scanner- Flat Bed A4/Auto Lighter (Bit depth 48)	02		20,000
	132 Column 600 CPS or faster 9 Pin dot matrix printer with 500 million character head life	02		50,000
	Laser Jet-A4 All In one 20 page per min (2 Each)	04		50,000
	Desk Jet-A4 Photo Smart (2 Each)	04		40,000
	5 KVA on line UPS with minimum 30 minute battery	04		8,00000

	backup along with sealed maintenance free batteries. Provision for connecting external batteries with network connectivity.(For 2 Labs)			
	Split Air Conditioner 1.5 tones capacity with ISI mark along with electronic voltage stabilizer with over voltage and time delay circuit	08		35,0000
	Room preparation and furniture	LS		
	19" rack, 24-port switch. connector RJ-45 Cat-6 cabling for network	LS		10,0000
	2 KVA Inverter Cum UPS	02		6,0000
	Fire Extinguisher (2 Kg.)	04		15000
	Fire Extinguisher (5 Kg.)	04		25000
	Vacuum Cleaner	02		25000
	LCD Projector 3000 Lumen with all accessories	02		350000
	Pen Drive 16 GB	10		10000
	DVD Writer External	02		10000
	HDD External 500 GB	02		15000
	PAD (Latest Configuration)	02		15000
	Broad band For Internet (Speed Min. 8mbps)	04		LS
	USB Modem	02		8000
	Generator 15 KVA Water Coolant	01		450000
EMBROIDERY AND KNITTING SHOP				
	Frame Different Size (6", 9",10", 1 steel 1 plastic)	60		12,000.00
	Salma Adda (4'x3'15', 3'x2'x1.5')	30		12,000.00
	Zig Zag Embroidery sewing Machine Model - Motorized	15		300,000.00
	Sewing machine Treadle	30		240,000.00
	Stools	60		60,000.00
	Knitting needles Full set	10		5000
	Embroidery Scissors 4" plate and pointed	30		5,000.00
	Embroidery scissors 9"	10		2000.00
	Iron Table 5'x3'x2'	10		10,000.00
	Electric sewing machines with twin needle provision and zig-zag stitching.	5		100,000.00
	Lockstitch Machine	1		25,000.00
	Button Stitch & Button Hole machine	1		1,00,000.00
	Misc. (small equipments & latest Machinery)			1,00,000.00
Textile Science Lab				
1	Dye bath for Experimental work	10	500	5000
2	Spray , Block and Screen system of Printing	10 set	1000	10000
3	Blocks – Single double and triple colours	10 sets		5000

4	Heating arrangement of wax for Batik	1		5000
5	Frames for free hand painting	60		5000

Note :

1-Indian make working laboratory models for the costly equipment be purchased if available.

2-for Facilities not available in the lab , frequent industrial visits for demonstration recommended.

(C) Furniture Requirement

Norms and standards laid down by AICTE be followed for working out furniture requirement for this course.

10.2 Human Resources Development:

Weekly work schedule, annual work schedule, student teacher ratio for various group and class size, staffing pattern, work load norms, qualifications, experience and job description of teaching staff workshop staff and other administrative and other administrative and supporting staff be worked out as per norms and standards laid down by the AICTE.

11. EVALUATION STRATEGY

11.1 INTRODUCTION

Evaluation plays an important role in the teaching-learning process. The major objective of any teaching-learning endeavour is to ensure the quality of the product which can be assessed through learner's evaluation.

The purpose of student evaluation is to determine the extent to which the general and the specific objectives of curriculum have been achieved. Student evaluation is also important from the point of view of ascertaining the quality of instructional processes and to get feedback for curriculum improvement. It helps the teachers in determining the level of appropriateness of teaching experiences provided to learners to meet their individual and professional needs. Evaluation also helps in diagnosing learning difficulties of the students. Evaluation is of two types: Formative and Summative (Internal and External Evaluation)

Formative Evaluation

It is an on-going evaluation process. Its purpose is to provide continuous and comprehensive feedback to students and teachers concerning teaching-learning process. It provides corrective steps to be taken to account for curricular as well as co-curricular aspects.

Summative Evaluation

It is carried out at the end of a unit of instruction like topic, subject, semester or year. The main purpose of summative evaluation is to measure achievement for assigning course grades, certification of students and ascertaining accountability of instructional process. The student evaluation has to be done in a comprehensive and systematic manner since any mistake or lacuna is likely to affect the future of students.

In the present educational scenario in India, where summative evaluation plays an important role in educational process, there is a need to improve the standard of summative evaluation with a view to bring validity and reliability in the end-term examination system for achieving objectivity and efficiency in evaluation.

11.2 STUDENTS' EVALUATION AREAS

The student evaluation is carried out for the following areas:

- Theory
- Practical Work (Laboratory, Workshop, Field Exercises)
- Project Work
- Professional Industrial Training

A. Theory

Evaluation in theory aims at assessing students' understanding of concepts, principles and procedures related to a course/subject, and their ability to apply learnt principles and solve problems. The formative evaluation for theory subjects may be caused through sessional /class-tests, home-assignments, tutorial-work, seminars, and group discussions etc. For end-term evaluation of theory, the question paper may comprise of three sections.

Section-I

It should contain objective type items e.g. multiple choice, matching and completion type. Total weightage to Section-1 should be of the order of 20 percent of the total marks and no choice should be given in this section. The objective type items should be used to evaluate students' performance in knowledge, comprehension and at the most application domains only.

Section-II

It should contain short answer/completion items. The weightage to this section should be of the order of 40 percent of the total marks. Again, no choice should be given in section-II

Section-III

It may contain two to three essay type questions. Total weightage to this section should be of the order of 40 percent of the total marks. Some built-in, internal choice of about 50 percent of the questions set, can be given in this section

Table II : Suggested Weightage to be given to different ability levels

Abilities	Weightage to be assigned
Knowledge	10-30 percent
Comprehension	40-60 percent

Application	20-30 percent
Higher than application i.e. Analysis, Synthesis and Evaluation	Upto 10 percent

B. Practical Work

Evaluation of student's performance in practical work (Laboratory experiments, Workshop practicals/field exercises) aims at assessing student's ability to apply or practice learnt concepts, principles and procedures, manipulative skills, ability to observe and record, ability to interpret and draw conclusions and work related attitudes. Formative and summative evaluation may comprise of weightages to performance on task, quality of product, general behavior and it should be followed by viva-voce.

C. Project Work

The purpose of evaluation of project work is to assess student's ability to apply, in an integrated manner, learnt knowledge and skills in solving real life problems, manipulative skills, ability to observe, record, creativity and communication skills. The formative and summative evaluation may comprise of weightage to nature of project, quality of product, quality of report and quality of presentation followed by viva-voce.

12. RECOMMENDATIONS FOR EFFECTIVE CURRICULUM IMPLEMENTATION

This curriculum document is a Plan of Action and has been prepared based on exhaustive exercise of curriculum planning and design. The representative sample comprising selected senior personnel (lecturers and HODs) from various institutions and experts from industry/field have been involved in curriculum design process.

The document so prepared is now ready for its implementation. It is the faculty of polytechnics who have to play a vital role in planning instructional experiences for the courses in four different environments viz. class-room, laboratory, library and field and execute them in right perspective. It is emphasized that a proper mix of different teaching methods in all these places of instruction only can bring the changes in stipulated students behavior as in the curriculum document. It is important for the teachers to understand curriculum document holistically and further be aware of intricacies of teaching-learning process (T-L) for achieving curriculum objectives. Given below are certain suggestions which may help the teachers in planning and designing learning experiences effectively. These are indicative in nature and teachers using their creativity can further develop/refine them. The designers of the Programme suggest every teacher to read them carefully, comprehend and start using them.

(A) Broad Suggestions:

1. Curriculum implementation takes place at Programme, course and class-room level respectively and synchronization among them is required for its success. The first step towards achieving synchronization is to read curriculum document holistically and understand its rationale and philosophy.

2. An academic plan needs to be prepared and made available to all polytechnics well in advance. The Principals have a great role to play in its dissemination and, percolation up to grass-root level. Polytechnics, in turn are supposed to prepare institutional academic plan.

3. HOD of every Programme Department along with HODs and in charges of other departments are required to prepare academic plan at department level referring to institutional academic plan.

4. All lecturers/Senior lecturers are required to prepare course level and class level lesson plans referring departmental academic plan.

(B) Course Level Suggestions

Teachers are educational managers at class room level and their success in achieving course level objectives lies in using course plan and their judicious execution which is very important for the success of Programme by achieving its objectives.

Polytechnic teachers are required to plan various instructional experiences viz. theory lecture, expert lectures, lab/workshop practical, guided library exercises, field visits, study tours, camps etc. In addition, they have to carry out progressive assessment of theory, assignments, library, practical and field experiences. Teachers are also required to do all these activities within a stipulated period of time. It is essential for them to use the given time judiciously by planning all above activities properly and ensure execution of the plan effectively.

Following is the gist of suggestions for subject teachers to carry out T-L process effectively:

1. Teachers are required to prepare a course plan, taking into account departmental academic plan, number of weeks available and courses to be taught.

2. Teachers are required to prepare lesson plan for every theory class. This plan may comprise of contents to be covered, learning material for execution of a lesson plan. They may follow steps for preparing lesson plan e.g. drawing attention, state instructional objectives, help in recalling pre-requisite knowledge, deliver planned subject content, check desired learning outcomes and reinforce learning etc.

3. Teachers are required to plan for expert lectures from field/industry. Necessary steps are to plan in advance, identify field experts, make correspondence to invite them, take necessary budgetary approval etc.

4. Teachers are required to plan for guided library exercises by identification of course specific experience requirement, setting time, assessment, etc. The assignments and seminars can be thought of as terminal outcome of library experiences.

5. Concept and content based field visits may be planned and executed for such content of course which is abstract in nature and no other requisite resources are readily available in institute to impart them effectively.

6. There is a dire need for planning practical experiences in right perspective. These slots in a course are the avenues to use problem based learning/activity learning/ experiential learning approach effectively. The development of lab instruction sheets for the course is a good beginning to provide lab experiences effectively.

7. Planning of progressive assessment encompasses periodical assessment in a semester, preparation of proper quality question paper, assessment of answer sheets immediately and giving constructive feedback to every student

8. The student centered activities may be used to develop generic skills like task management, problem solving, managing self, collaborating with others etc.

9. Where ever possible, it is essential to use activity based learning rather than relying on delivery based conventional teaching all the time.

10. Teachers may take initiative in establishing liaison with industries and field organizations for imparting field experiences to their students.

11. Students be made aware about issues related to ecology and environment, safety, concern for wastage of energy and other resources etc.

12. Students may be given relevant and well thought out project assignments, which are purposeful and develop practical skills. This will help students in developing creativity and confidence for their gainful employment.

13. A Project bank may be developed by the concerned department of the polytechnics in consultation with related Industry, research institutes and other relevant field organizations in the state.

13. LIST OF PARTICIPANTS

The following experts have participated in workshop for Developing the Curricula Structure and Contents of P. G. Diploma Programme in Fashion Technology for UP State on 14 October, 2019 at IRDT Kanpur :

1. Dr. Alka Ali, Professor, UPTTI Kanpur.
2. Dr. Ruchi Mittal, Principal Ruchi's Institute of Creative Arts, Allahabad
3. Shri Pankaj Yadav, Assistant Director, Directorate of Technical Education, Kanpur, U.P.
4. Shri Ashok Panday, HOD Fashion Technology, GGP, Lucknow.
5. Shri Ashif Zadi, HOD Fashion Technology, GGP. Varanasi.
6. Shri Dinesh Gautam, Lecturer, Fashion Technology, GGP Varanasi.
7. Smt. Neelu Jha, Lecturer, United Institute of Engineering, Kanpur.
8. Smt. Ranjana Mishra, Lecturer SJPML polytechnic Ghaziabad.
9. Ms. Kalpana Devi, Assistant Professor/Coordinator, IRDT Kanpur