

3.1 GARMENT DESIGN - I

L T P
- - 4

RATIONALE

The students should be able to design garments and accessories for different age groups, and occasions with proper selection of fabrics. After going through this subject, the student will be able to design garments appropriately to customers satisfaction and need.

DETAILED CONTENTS

PRACTICAL EXERCISES

1. Designing garments for children (casual and formal) by using flat sketch technique in various colourways and textures; swatches and their replicas.

- | | | |
|-------------------|--|-----------------|
| - Frocks | | - 2 sheets each |
| - Skirts and tops | | |
| - Jump suits | | |
| - Night wears | | |
| - Trouser/shorts | | |
| - jackets | | |

2. Portfolio collection from above exercises
3. Sketching Accessories: Kids shoes, belts, school bags etc.
4. Sourcing of suitable materials

The students should do a market survey for the fabrics, colours and textures available in the market. They are required to attach suitable fabric swatches on the design sheets.

RECOMMENDED BOOKS

1. Design for the Real World: Human Ecology and Social Change by Papanek
2. Repeat Patterns: A Manual for Designers, Artists and Architects by Phillips and Bunce
3. Textiles Designs 200 Years of Patterns for Printed Fabrics by Meller and Elffers

3.2 PATTERN MAKING

L T P
- - 8

RATIONALE

The students are supposed to know how to adapt basic blocks to various garment designs, and layouts. Thus the subject deals with variations of pattern and styling of garments. After going through this subject, the students will be able to draft various components of the garments and express design ideas by a three dimensional process of pattern making.

DETAILED CONTENTS

PRACTICAL EXERCISES

1. Drafting of adult's bodice block and sleeve
2. Adaptation of adults bodice block to saree blouse
3. Drafting of adult bodice block and sleeve for knit fabric
4. Adaptation of basic block into T-shirt
5. Drafting of adult's skirt block
6. Adaptation of skirt block to various styles
7. Adaptation of plain sleeve to the following sleeves
 - Ruffle sleeve
 - Bishop sleeve
 - Kimono sleeve
 - Raglan sleeve
 - Dolman
8. Drafting of the following collars
 - Chinese band
 - Shawl collar
 - Stand and fall collar
 - Two piece notched collar
 - Rever
 - Cowls

9. Introduction of style lines in the garment
 - a) princess line
 - b) empire line

RECOMMENDED BOOKS

1. Fashion Drawing Designs; Magazine of Thailand
2. Pattern Designs for Haute Couture Volume – I
3. Fashion Drawing – The Basic Principles by Anne Allen and Julion Seaman
4. Latest Fashion Style by Winter Hiver
5. Jasmine’s “New Look, On Indian Fashion Scene”
6. Lifestyles: Fashion Styles by Katheryn Samuel
7. Spring and Summer Collection; Tokyo, New York
8. Draping for Fashion Design by Jaffe, Hilde
9. Fashion from Concept to Consumer by Stephens

3.3 CAD IN GARMENT TECHNOLOGY - I

L T P
- - 4

RATIONALE

The term CAD has found its way into all major disciplines that have got anything to do with designing or drafting techniques. The objective of the subject is to expose professionals and to meet the needs of the users by complementing their knowledge, skills and ability, creativity in the field of garment technology and their application in the industry.

DETAILED CONTENTS

PRACTICAL EXERCISES

(Software: Use of Corel Draw and Adobe Photoshop)

1. Introduction to Corel Draw and Adobe Photoshop
2. Create a composition of geometrical shapes in “8x8” Block
3. Design a traditional motifs, a contemporary motif, Nursery prints etc.
4. Make a power point presentation of at least 10 slides selecting your own topic.

Note : Visit Design Studios in Export Houses and Industry to understand the use of these softwares by designers.

RECOMMENDED BOOKS

1. Literature from the supplier of each software can be consulted
2. Corel Draw 12 – BPB Publication (latest version)
3. Adobe Photoshop 5.5 - BPB Publication (latest version)

3.4 GARMENT CONSTRUCTION-III

L T P
2 - 6

RATIONALE

The diploma holders in garment technology are supposed to fabricate the garments for kids; as per the layouts and specifications. Hence this subject has been included in the curriculum in order to develop such competencies.

DETAILED CONTENTS

Theory

1. Preparation of fabric for cutting (04 hrs)
 - Straightening the fabric
 - Shrinking the fabric
 - Ironing/pressing the fabric
2. Sequence of cutting (04 hrs)

Laying out the pattern pieces, marking and transferring the pattern details, cutting
3. Selection and Handling of special fabrics while cutting and stitching (02 hrs)
4. Construction details (10 hrs)
 - Seams and seam finishes
 - Fullness and its types – Gathers/Pleats
 - Shirring, Smocking
 - Plackets and fasteners
 - Hem finishes
 - Lining/interlining
 - Facing/interfacings
5. Decorative Details (04 hrs)
 - Frills, flounces, peplums
 - Trimmings
 - Belts and bows
6. Fitting (08 hrs)
 - Principles of good fit
 - Sequence of fitting
 - Alterations to achieve a good fit

PRACTICAL EXERCISES

1. Construction of following kids wear in Knits –
 - (a) A- line Frock
 - (b) Romper
 - (c) Gathered Frock
 - (d) Skirt (Bloomer Pantie)

Note: Exposure to different types of linings and fusing materials available in the market.

RECOMMENDED BOOKS

1. Pattern Making for Fashion design by Amstrong, Vikas Publishing House Pvt. Ltd. Delhi
2. Clothing Construction by Doongaji, Raj Parkashan, New Delhi
3. System of Cutting by Zarapkar, Navneet Publications (India) Ltd.
4. Clothing Construction by Evelyn A Mansfield, Hougutan Miffin Co., Boston
5. Creative Sewing by Allynie Bane; McGraw Hill Book Co., Inc., New York
6. How You Look and Dress by Byrta Carson; McGraw Hill Book Co., Inc., New York
7. Complete Guide to Sewing by Reader's Digest, Pitman Publishing Corpn. New York

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Hrs)	Marks Allotted (%)
1	4	12
2	4	12
3	2	6
4	10	32
5	4	12
6	8	26
Total	32	100

3.5 CUTTING ROOM TECHNIQUES

L T P
2 - 4

RATIONALE

This subject informs the students about all the techniques followed in the cutting room, i.e. spreading, cutting and marker making. After going through this subject, they will be able to plan and schedule all the operations of cutting room

DETAILED CONTENTS

THEORY

PRACTICAL EXERCISES

- | | | |
|--|--|---|
| 1. Fabric consumption estimation
(10 hrs)
How to plan a marker on basis of
- No. of pieces in a garment
- Number of sizes
- Width of fabric
- Nature/Hand of fabric
- Design/orientation of fabric
- Calculation of marker consumption | | Estimation of materials using different sizes and fabric width

Developing miniature patterns for various widths of fabric
Placement of pattern on paper (manual marker) |
| 2. Spreading Techniques (6 hrs)
Mode of fabric spreading | | - Identifying different techniques for various types of fabrics (knit, woven, checks, stripes)
- Mode of fabric spreading – FONON, FONE etc. |
| 3. Spreading Equipment (3 hrs)
- Manual spreading techniques
- Automatic spreading techniques | | Demonstration of spreading. Practice with spreading equipment (Demonstration of CAM) |
| 4. Cutting Equipment (3 hrs) | | Practice on cutting machine and maintenance of cutting machine (Circular knife cutter & vertical knife cutter, auto cut, water jet, laser) |
| 5. Bundling/Ticketing (2 hrs) | | |
| 6. Cutting Defects (3 hrs) | | Demonstration of cutting defects |
| 7. Fusing techniques (3 hrs) | | Demonstration of Fusing Techniques |
| 8. Factors leading to maximum utilization of fabric (2 hrs) | | |

INSTRUCTIONAL STRATEGY

The teacher should give extensive training to the students on cutting techniques so that the students are able to plan and schedule various operations adopted in a cutting room. They should be taken for industrial visit to demonstrate various cutting processes.

RECOMMENDED BOOKS

1. Industrial Machinery – Solinger, Oxford University Press, USA
2. Managing Quality – PV Mehta and SK Bhardwaj, New Age Publisher, Delhi
3. Introduction to Clothing Technology – Harold Carr & Latham, John Wiley & Sons, New York
4. Complete guide to sewing by Reader’s Digest, Pitman Publishing Corporation, New York

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Hrs)	Marks Allotted (%)
1	10	32
2	06	19
3	03	09
4	03	09
5	02	07
6	03	09
7	03	09
8	02	06
Total	32	100

3.6 INDUSTRIAL GARMENT MACHINERY

L T P
2 - 4

RATIONALE

The students are expected to know various types of machinery and equipment used in manufacturing of garments. They should be able to operate and maintain the machinery and rectify the common defects. The subject intends to develop such skills in the students.

DETAILED CONTENTS

THEORY	PRACTICAL EXERCISES
1. The main types of stitching machinery and their uses in garment assembly (industry setup) (04 hrs)	SNLS, DNLS, FOA, BARTACK, Overlock(3th/5th), Button Sewing, Collar Turning, Chain Stitch
2. General purpose of sewing machines: Working of sewing machines hand operated, treadle operated and electric operated. Function of different components of sewing machine (08 hrs)	Dismantling and assembly of a hand operated sewing machine Usage of various components of machines with respect to various operations
3. Attachments: Tuckers, hemmer, seam, guide, binders, button hole, folders and trimmers (06 hrs)	Dismantling and assembly of a treadle operated sewing machine with all attachments
4. Needles/Feed Dogs/Presser Foot (02 hrs)	Collection of pictures and samples
5. Different types of garment manufacturing machines (02 hrs)	Demonstration of parts of following machines or visit to a garment manufacturing unit to study different types of garment manufacturing machines Making of following samples: - Lock stitch machine (SNLS) - Chain stitch machine (SNCS/ DNCS) - Over lock machine (O/L) - Button hole machine(B/H) - Zig-zag machine - Double needle lockstitch machine (DNLS) - Bar-tacking machine - Blind stitch machine - Flat lock machine (F/L) - Feed off the Arm

- | | | |
|----|--|--|
| 6. | Necessity of preventive, periodic and corrective maintenance
(04 hrs) | Cleaning and lubricating of different types of sewing machines |
| 7. | Types of lubricating oil used, maintenance schedule for lubricating the machines
(02 hrs) | |
| 8 | Federal stitch standards – various stitch types as per international standards – class 100, 300, 400, 500, 600
- Seam Types
(04 hrs) | Demonstrate various types of stitches in the laboratory or visit to a garment manufacturing unit to show various types of stitches |

INSTRUCTIONAL STRATEGY

The students should be given exercises on fault finding and repairing the defective machines by demonstration so that they are able to maintain the garment machinery in proper working condition.

RECOMMENDED BOOKS

1. Industrial Machinery by Solinger, Solinger, Oxford University Press, USA
2. Introduction to clothing Technology – Harold Carr and Latham, John Wiley & Sons, New York
2. Managing Quality - PV Mehta & SK Bhardwaj, New Age Publishers, Delhi

SUGGESTED DISTRIBUTION OF MARKS

Topic No.	Time Allotted (Hrs)	Marks Allotted (%)
1	04	12
2	08	25
3	06	19
4	02	06
5	02	06
6	04	12
7	02	06
8	04	14
Total	32	100

ECOLOGY AND ENVIRONMENTAL AWARENESS CAMP

A diploma holder must have knowledge of different types of pollution caused due to industries and constructional activities so that he may help in balancing the eco system and controlling pollution by pollution control measures. He should also be aware of environmental laws related to the control of pollution.

This is to be organized at a stretch for 3 to 4 days. Lectures will be delivered on following broad topics. There will be no examination for this subject.

1. Basics of ecology, eco system and sustainable development
2. Conservation of land reforms, preservation of species, prevention of advancement of deserts and lowering of water table
3. Sources of pollution - natural and man made, their effects on living and non-living organisms
4. Pollution of water - causes, effects of domestic wastes and industrial effluent on living and non-living organisms
5. Pollution of air-causes and effects of man, animal, vegetation and non-living organisms
6. Sources of noise pollution and its effects
7. Solid waste management; classification of refuse material, types, sources and properties of solid wastes, abatement methods
8. Mining, blasting, deforestation and their effects
9. Legislation to control environment
10. Environmental Impact Assessment (EIA), Elements for preparing EIA statements
11. Current issues in environmental pollution and its control
12. Role of non-conventional sources of energy in environmental protection