

**SCHOOL OF PROFESSIONAL STUDIES**

**PROGRAMME: BACHELOR OF SCIENCE IN FASHION AND APPAREL DESIGN**

**SEMESTER - V**

**CORE COURSES:**

<b>Course Code</b>	<b>Course Title</b>	<b>Credits</b>	<b>CIA</b>	<b>ESE</b>
07ABFAE17551	Apparel Industrial Engineering			
	Theory	4	40	60
	Practical	2	20	30
(Or)	(Or)			
07ABFAM17551	Apparel Quality Management			
	Theory	4	40	60
	Practical	2	20	30
07ABFVM17552	Visual Merchandising			
	Theory	4	40	60
	Practical	2	20	30
(Or)	(Or)			
07ABFFA17552	Fashion Advertising			
	Theory	4	40	60
	Practical	2	20	30
07ABFTE17553	Traditional Indian Embroidery			
	Theory	4	40	60
	Practical	2	20	30
(Or)	(Or)			
07ABFID17553	Inspirational Theme Development & Designing			
	Theory	4	40	60
	Practical	2	20	30

**SKILL ENHANCEMENT COURSE:**

07ASECO17533	Research Methodology	2	20	30
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ESE – End Semester Examination

CIA – Continuous internal assessment

Pass % - ESE – 30%, CIA – 50%, Cumulative – 40%

## **SEMESTER: V**

### **COURSE TITLE: APPAREL INDUSTRIAL ENGINEERING**

**COURSE CODE:**07ABFAE17551

**CREDITS: 4**

#### **Unit 1:**

1.1 INDUSTRIAL ENGINEERING: Meaning, Definition, Objective, Need, Scope, Evolution and developments.

1.2 PRODUCTIVITY: Definition of productivity, individual enterprises, task of management productivity of materials, land, building, machine and power. Measurement of productivity, factors affecting the productivity, productivity improvement programs, wages and incentives (simple numerical problems).

#### **Unit 2:**

2.1 WORK STUDY: Definition, objective and scope of work study. Human factors in work study. Work study and management, work study and supervision, work study and worker.

2.2 METHOD STUDY: Definition, objective and scope of method study, activity recording and exam aids. Charts to record moments in shop operation – process charts, flow process charts, travel chart and multiple activity charts. (With simple problems).

2.3 MICRO AND MEMO MOTION STUDY: Charts to record moment at work place – principles of motion economy, classification of moments two handed process chart, SIMO chart, and micro motion study. Development, definition and installation of the improved method, brief concept about synthetic motion studies.

#### **Unit 3:**

3.1 WORK MEASUREMENT: Definition, objective and benefit of work measurement. Work measurement techniques. Work sampling: need, confidence levels, sample size determinations, random observation, conducting study with the simple problems. (K,L,Ap)

3.2 TIME STUDY: Time Study, definition, time study equipment, selection of job, steps in time study. Breaking jobs into elements, recording information. Rating & standard rating, standard performance, scale of rating, factors of affecting rate of working, allowances and standard time determination. Pre-determined motion time study – Method time measurement (MTM).

#### **Unit 4**

4.1 ERGONOMICS: Introduction, areas of study under ergonomics, system approach to ergonomics model, man-machine system. Components of man-machine system and their functions – work capabilities of industrial worker, study of development of stress in human body and their consequences. Computer based ergonomics.

4.2 DESIGN OF MAN-MACHINE SYSTEM: Fatigue in industrial workers, Quantitative qualitative representation and alphanumeric displays, Controls and their design criteria, control

types, relation between controls and displays, layouts of panels and machines. Design of work places, influence of climate on human efficiency. Influence of noise, vibration and light.

### **UNIT 5: CURRENT TRENDS**

5.1 Introduction to agile manufacturing, Lean and Six Sigma, value engineering, just in time, total quality management.

5.2 Enterprise resource planning, Supply chain and logistics management.

## **PRACTICAL**

**CODE:07ABFAE17551**

**CREDIT:02**

### **Unit 1**

#### **METHOD STUDY**

1.1 Recording techniques using charts. i) Outline process chart. ii) Flow process chart. iii) Multiple activity charts.

1.2 Recording Techniques using diagrams. i) Flow diagram. ii) String diagram.

1.3 Application of principle of motion economy: Two handed process chart

1.4 Assembling simple components. Peg board assembly.

1.5 Development of Plant Layout using Black board

### **Unit 2**

#### **WORK MEASUREMENT**

2.1 Rating practice using: i) Walking simulator. ii) Pin board assembly, iii) Dealing a deck of cards. iv) Marble collection activity

2.2 Determining the standard time using i) Simple operations using stopwatch time study. ii) Predetermined Method Time Study (PMTS).

### **Unit 3**

#### **ERGONOMICS**

3.1 Measurement of heart beat rate, calorie consumption parameters using: i) Walking simulator. ii) Cycle ergo-meter.

3.2 Effect of human efficiency in work environments: i) Noise. ii) Light.

### **References Books:**

- “Introduction to work study” ILO, - III Revised Edition, 1981
- “Motion and Time study “- Ralph M Barnes; John Wiley, 8th Edition, 1985.
- “Engineered work Measurement” - Weldon, ELBS, Marvin E. Mundel- Motion and Time study, PHI, 1st edition, 1991.
- “Human Factors in Engineering Design” - S Sanders and E J McCormick, 6th Edition, McGraw Hill
- “Work Study and Ergonomics “- S Dalela and Sourabh, Chand Publishers, 3rd edition.
- “Introduction to work study” by ILO. 4. “Work Study “- Ralph & Barnes.

**SEMESTER: V**

**COURSE TITLE: APPAREL QUALITY MANAGEMENT**

**COURSE CODE:07ABFAM17551**

**CREDITS: 04**

**Unit 1**

- 1.1 Introduction to Quality, Basic terminologies, Evolution of Quality management, Quality Function and Quality Planning.
- 1.2 Basic concepts of Total Quality Management (TQM), Principles of TQM, 7 Tools of TQM. Quality Trilogy.
- 1.3 PDCA cycle & PDSA cycle. Kaizan concept, 5'S Philosophy, Quality Circles.

**Unit 2**

- 2.1 Statistical Quality Control (SQC), Quality Control (QC) objectives, methods and application.
- 2.2 Fabric defects, terms and types. 4-point system and 10-point system of fabric inspection.
- 2.3 IPQC-In process quality control, AQL- Apparel quality levels.

**Unit 3**

- 3.1 Garment Inspection-Men's wear, women's wear, kids wear.
- 3.2 Various types of care labelling system, its importance and application.
- 3.3 Eco labels labeling and its importance.

**Unit 4**

- 4.1 Garment processing and finishing. Garment dyeing, types of washing machines, centrifuge and drying.
- 4.2 Care of fabrics- Principles of laundering, Stain removal, various solvents used.
- 4.3 Need for ISO 9000 and Internal Auditing, Study on ISO 9001:2000 Guidelines and Standard Clauses, Environmental Management System (EMS), Implementation of ISO 14000.

**PRACTICAL**

**CREDITS: 02**

**CREDITS HOURS**

**Unit 1**

- 1.1 Fabric Defect Identification, Defect Folio
- 1.2 Fabric Inspection-4 & 10 Point system
- 1.3 Garment Defect Identification

## **Unit 2**

2.1 Various care labelling system and Eco labels.

2.2 Care Label Folio.

2.3 Creation and development of care labels

## **Unit 3**

3.1 Spec Sheet Analysis of men's, women's and kids wear.

3.2 Development of Spec sheet and Tech pack for Men's, Women's and Kids wear.

## **Unit 4**

4.1 Identification of Accessories defects.

4.2 Collection of various accessories, fastners, trims and packing material.

## **References Books:**

- A.J. Hall "The Standard Hand Book of Textiles", Woodhead Publication, 2004
- Pradeep V. Mehta & Satish Bharadwaj. "Managing Quality in Apparel Industries". New Age International, Ltd 1998
- Kenneth L. Arnold & Michael Holler, "Quality Assurance Method & Technologies" McGraw Hill Publishers, USA.
- Amubhai Patel, "Towards Zero Defect", Meena Publishers.

## **SEMESTER: V**

**COURSE TITLE: VISUAL MERCHANDISING**

**COURSE CODE:07ABFVM17552**

**CREDITS: 04**

### **Unit 1: Introduction to Visual Merchandising**

1.1 Introduction and concept of Visual Merchandising

1.2 Objectives of Visual Merchandising, Growth of Visual Merchandising

1.3 Scope of visual merchandising in India

1.4 Visual merchandising as a support for positioning strategy and prospects of visual merchandising.

### **Unit 2: The Merchandise Mix**

2.1 Introduction and objectives of merchandise mix.

2.2 Concept of Merchandise Mix, Merchandise line, The Assortment of products and assortment strategy, Importance of store wise display

2.3 Role of a merchandiser, common challenges and challenges in Visual Merchandising.

### **Unit 3: Store Design and Display**

- 3.1 Concept of Store Design and Display.
- 3.2 Objectives of store design, purpose and importance of display, Rules of display planning, Display Settings, Store Design, Exterior of a store, Interior of a store, Window displays.
- 3.3 Merchandise Presentation strategies, color blocking, Other techniques of merchandise placement, Physical materials used to support the display, Components of display, display Fixtures, Shelves tracker, signage, gondolas, round racks, four ways, Saccades and fixation, replenishes, lighting, music and fragrance.

### **Unit 4: Store Management in Merchandising**

- 4.1 Types of stores, location of a store and types of retail locations.
- 4.2 Planning a store layout, various types of store layouts, grid layout, forced-path layout, Free-form layout, boutique layout, combined layout, store space allocation, Heads of space allocation in a store and managing customer navigation in a Store.
- 4.3 Visual Merchandising in domestic and international brands.

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**CODE: 07ABFVM17552**

**CREDITS: 02**

### **Unit: 1**

- 1.1 List the types of stores
- 1.2 Illustration of different types of stores

### **Unit: 2**

- 2.1 Window display based on the season – Spring & Summer, Autumn & Winter
- 2.2 Illustration of the display plan (layout)
- 2.3 Written description of the product/product line and goals for the display

### **Unit: 3**

- 3.1 Tradeshow booth Design: Design a booth to promote your company, products, or both.
- 3.2 Illustration of the proposed tradeshow (layout)
- 3.3 Written description of the company and the goals for the exhibit.

### **Unit: 4**

- 4.1 Portfolio of different types of store displays.
- 4.2 Portfolio of different display and components.

### **References Books:**

- Dorothy D Prisco – Fashion merchandise information (New York)
- Elaine stone - Fashion Merchandising (McGraw-Hill Companies, 1990)
- Tony Morgan – Visual Merchandising 2<sup>nd</sup> Edition (Laurence King Publishing, 2011)

- Sarah Bailey and Jonathan Baker – Visual Merchandising for Fashion (Bloom burry Publishing)
- Johnny Tucker – Retail Desire: Design, Display and Visual Merchandising (Roto vision 2004)

**SEMESTER: V**

**COURSE TITLE: FASHION ADVERTISING**

**COURSE CODE: 07ABFFA17552**

**CREDITS: 04**

**Unit-1: Introduction to advertising**

- 1.1. Introduction.
- 1.2. Objectives of Advertising
- 1.3. Importance of advertising

**Unit – 2: Promotional mix**

- 2.1. Classification of advertising
- 2.2. Promotional mix.

**Unit – 3: Creating an advertise**

- 3.1 Pre planning and planning
- 3.2 Market survey- researching the target market
- 3.3 Print Media and Broadcast Media.
- 3.4 Role of software in advertising.

**Unit – 4 Advertising Industry**

- 4.1 Start-up of advertising agencies
- 4.2 Importance of advertizing agencies.
- 4.3 Importance of measuring effectiveness of advertising.

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**CODE: 07ABFFA17552**

**CREDITS: 02**

**Unit 1**

- 1.1 Designing logo with description
- 1.2 Designing visiting card

**Unit 2: Collection of various fashion advertising types**

- 2.1 Kids brand
- 2.2 Jewellery
- 2.3 Cosmetics

### **Unit 3**

- 3.1 Poster advertising
- 3.2 Wall display
- 3.3 Advertising through social media

### **Unit 4: Creating a brand –fashion product**

- 4.1 Fashion jewellery
- 4.2 Foot wear
- 4.3 Bags

### **References Books:**

- Roger Lindeback-“*Building a Brand is Like Building a House*”.
- Rob Harris -“*No Nonsense Niche Selection*”.

## **SEMESTER: V**

### **COURSE TITLE: TRADITIONAL INDIAN EMBROIDERY**

**COURSE CODE:07ABFTE17553**

**CREDITS: 04**

#### **Unit I: Basic embroidery stitches**

- 1.1 Introduction to Embroidery and basic embroidery stitches. Classification of embroidery stitches.
- 1.2 Running stitch, back stitch, stem stitch, chain stitch & satin stitch
- 1.3 Cross stitch, herring bone, feather stitch, bullion knot and French knot

#### **Unit II: Traditional Embroideries – 1**

- 2.1 Introduction to traditional embroideries from different regions of India.
- 2.2 Categorization of embroideries based on region.
- 2.3 South Indian tribal and traditional embroideries
- 2.4 Kasuti from Karnataka and Lambadi from Andhra Pradesh

#### **Unit III: Traditional embroideries - 2**

- 3.1 North India- Kashida from Kashmir, Phulkari from Punjab, ChambaRumal from Himachal Pradesh
- 3.2 West India – Embroideries from Gujarat

#### **Unit IV: Traditional embroideries - 3**

- 4.1 East India- Kanta from Bengal, Applique work from Orissa (K,L&Ap)
- 4.2 Central part of India – Chikankari from Uttar Pradesh, Zardozi from Uttar Pradesh

## **PRACTICAL**

**CODE:07ABFTE17553**

**CREDIT:02**

### **Unit 1: Basic embroidery stitches**

Running stitch, back stitch, stem stitch, chain stitch, satin stitch, cross stitch, herring bone, feather stitch, bullion knot, French knot

### **Unit 2: South Indian Embroideries**

Kasuti from Karnataka, Lambadi embroidery from Andhra Pradesh, West India- Embroidery from Gujarat

### **Unit 3: North Indian embroideries**

Kashida from Kashmir, Phulkari from Punjab, ChambaRumal from Himachal Pradesh

### **Unit 4: East Indian embroideries**

Kanta from Bengal, Applique work from Orissa, Central Indian embroideries, Chikankari from Uttar Pradesh, Zardozi from Uttar Pradesh

### **References Books:**

- Shailaja D Naik, Traditional Embroideries of India, APH Corp New Delhi 1996
- Usha Shrikant: Ethnic embroideries of India, 1998 and 2000
- Shrikant, Usha, Designs for a life time, Honestly publishers and distributors, Mumbai 2010
- Barbara Snook, Creative art of embroidery, Nambly Pub, Group Ltd, London 1972
- Sathisan, Innova: Indian Ethnic Designs, Honesty Publishers and distributors, Mumbai 2009

## **SEMESTER: V**

**COURSE TITLE: INSPIRATIONAL THEME DEVELOPMENT AND DESIGNING**

**COURSE CODE:07ABFFP17553**

**CREDITS: 04**

### **Unit-1: Introduction**

- 1.1 Introduction to inspiration
- 1.2 Importance and source of inspiration
- 1.3 Process and planning for inspiration

### **Unit – 2: Fashion designers**

- 2.1 Correlation of fashion and inspiration.
- 2.2 Fashion Designers and their inspirations.
- 2.3 Garments based on inspiration.

**Unit – 3: Draping**

- 3.1 Introduction to draping
- 3.2 Principles of draping
- 3.3 Draping techniques of basic bodice & skirt

**Unit – 4**

- 4.1 Added fullness
- 4.2 Style lines

**PRACTICAL****CODE: 07ABFID17553****CREDITS: 02****Unit - 1**

- 1.1. Draping basic bodice.
- 1.2. Draping of basic skirt
- 1.3. Draping basic collar (peter pan, stand collar, mandarin collar- any two)
- 1.4. Draping princess dress

**Unit - 2**

- 2.1. Theme boards
- 2.2. Inspiration boards

**Unit - 3**

- 3.1 Inspiration board based on history.
- 3.2 Design sketch
- 3.3 Development of garment using draping.

**Unit - 4**

- 4.1 Inspiration board based on architecture.
- 4.2 Design sketch.
- 4.3 Development of garment using draping

**References Books:**

- Abling, Bina and Maggio, Kathleen, Integrating draping, drafting and drawing, Fairchild Books, Inc.
- Connie Amaden Crawford, The Art of Fashion and Design, Fairchild Publications
- Jaffe, Hilde and Relis, Nurie, Draping for fashion design, Pearson Prentice Hall

**SEMESTER: V**

**COURSE TITLE: RESEARCH METHODOLOGY**

**CODE: 07ASECO17533**

**CREDITS: 02**

**Unit 1: INTRODUCTION TO RESEARCH AND RESEARCH DESIGN**

- 1.1 Meaning, objectives, types of research, scope of research, research approaches.
- 1.2 Research Process
- 1.3 Research design, steps in research design, problem formulation

**Unit 2: SAMPLING AND METHODS OF DATA COLLECTION**

- 2.1 Sample design and sampling techniques.
- 2.2 Determination of sample size
- 2.3 Collection of data – primary and secondary sources.
- 2.4 Guidelines for questionnaire design and Interviewing.

**Unit 3: Processing and Analysis of Data**

- 3.1 - Tabulation of data, analysis of data
- 3.2 - Testing of hypothesis, types of analysis, correlation, regression analysis, ANOVA, Chi-Square.
- 3.3 Role of computers in data analysis. Introduction to SPSS, AMOS and R software.

**Unit 4: REPORT WRITING**

- 4.1 - Types of reports, business, technical and academic report writing
- 4.2 - Methodology procedure, contents.
- 4.3 – Bibliography

**References Books:**

- O.R.Krishnaswamy; Research methodology in Social Sciences, HPH, 2008.
- R. Dwivedi: Research Methods in Behavior Science, Macmillan India Ltd., 2001.
- J.K. Sachdeva: Business Research Methodology HPH
- S.N. Murthy, V. Bhojanna: Business Research Methods Excel Books
- Levin & Rubin: Statistics for Management, Prentice Hall of India, 2002.
- Gupta S; Research Methodology and Statistical Techniques, Deep & Deep Publication (P) Ltd., 2002
- Tripathi, P.C: A Textbook of Research Methodology, Sultan Chand & Sons, 2002.
- Cooper: Business Research Methods 6<sup>th</sup> edition, MC Graw Hill,
- C.R. Kothari, Research Methodology, Vikas Publications.