

GARDEN CITY UNIVERSITY
SCHOOL OF PROFESSIONAL STUDIES
PROGRAMME: M.Sc. FASHION & APPAREL DESIGN

II SEMESTER

CORE COURSES:

Course Code	Course Title	Paper	Credits	CIA	ESE	Total
07BMSFR19211	Advanced Textile Science	Theory	4	40	60	100
		Practical	2	20	30	50
07BMSFR19212	Creative Designing	Theory	4	40	60	100
		Practical	2	20	30	50
07BMSFR19213	Garment Construction - 2	Theory	4	40	60	100
		Practical	2	20	30	50
07BMSFR19214	Surface Ornamentation and Accessory Designing	Practical	2	20	30	50
07BMSFR19215	Business Research Methodology	Theory	4	40	60	100
			24	240	360	600

ESE – End Semester Examination

CIA – Continuous internal assessment

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

II SEMESTER

COURSE TITLE: ADVANCED TEXTILE SCIENCE

COURSE CODE: 07BMSFR19211	CIA Marks: 40
CREDIT: 4	ESE Marks: 60
No of lecture Hours. / Week: 04	Total no. of Lecture Hours: 60

Objective:

- Study of commercial dyeing, printing & finishes with specialties and utility of the same.

Unit -1: Wet Processing

- 1.1 Introduction to wet processing, Preparatory processes: Desizing, Singing, Scouring, Bleaching, Mercerization.
- 1.2 Dyeing: Introduction, classification, Theory of Dyeing, Application of dyes- direct, basic, acid, vat, reactive, sulphur and disperse dyes. Eco-friendly dyeing, Natural dyes and organic dyes – importance and applications.

Unit - 2: Printing

- 2.1 Printing methods – block, screen, transfer and digital, Styles of printing - Direct, Resist,
- 2.2 Discharge and Transfer: After-treatments for dyed and printed product, printing of fabrics by screen and block using pigment, reactive and direct dyes.

Unit - 3: Textile Finishing

- 3.1 Textile finishes, Classification of finishes (Functional finishes, aesthetic finishes, mechanical finishes and chemical finishes) . Chemical finishing: Application of water repellent/proof, flame retardant, mildew proof, moth proof, anti-static, soil release, UV protection, anti microbial, odour control and fragrance finishes, resin finishing: durable press, wrinkle free, silicone finishing.
- 3.2 Garment Processing & finishing: Processing of grey fabric garments, garment dyeing, machinery for garment dyeing, garment finishing and printing.
- 3.3 Denim finishing: Process conditions, machineries, chemicals and enzymes used for various special effects, stone wash, enzyme wash, bio-polishing & bio-stoning; sand blasting, ozone and laser fading.
- 3.4 Specialty garment finishes: Leather finish, rubbery touch, feather touch, peach skin finish.

Unit - 4

- 4.1 Application of enzymes in processing: Mechanism of enzyme reactions – Bio scouring and Bio-bleaching and the other combined processes. Enzyme washing.
- 4.2 Energy conservation steps in chemical processing: Low wet pick-up techniques - causes and remedies for water and air pollution. Finishes which are hazardous for human health, International Brands safety issues as far as the Textile and Apparel finishing are concerned
- 4.3 Wastewater characteristics: wastewater treatment - objectives, methods and implementation considerations, recycling of effluents, low cost adsorbents and modern effluent treatment processes.

References:

- Tobler-Rohr M I, “Handbook of sustainable textile production”, Woodhead Publishing

Ltd, UK, 2011.

- Chritie R., “Environmental aspects of textile dyeing”, Woodhead Publishing Ltd, UK, 2007.
- Leslie W.C. Miles: “Textile Printing: Society of Dyers & Colorists Dyers Company”, 2003.
- Modern Technology of Textile Dyes & Pigments, H P Panda, National Institute of Industrial Research.
- A J Hall ‘The standard Hand Book of Textiles’ Woodhead Publication, 2004
- J E Smith ‘Textile Processing’ – Printing ,Dyeing , Abhishek Publishing,2003
- Kate Broughton textiles Dyeing , Rockport publishers, 1996
- W.S Murphy, ‘ Textile Finishing’ Abhishek Publication, 2000
- Rosi Robinson ‘Creative Batik’ Search Press,2004
- Janice gunner ‘Shibori for textile Artist’ Batsford London

PRACTICALS

COURSE CODE: 07BMSFR19211 (P)	CIA Marks: 20
CREDIT: 2	ESE Marks: 30
No of lecture Hours. / Week: 02	Total no. of lab sessions - 15

Unit – 1

- 1.1 Scouring and Bleaching
- 1.2 Degumming and Bleaching of silk yarns

Unit – 2

- 2.1 Dyeing of cotton fabric by direct, vat, reactive dyes.
- 2.2 Dyeing of silk fabric by acid dye.
- 2.3 Dyeing of polyester fabric with disperse dyes.

Unit – 3

- 3.1 Printing of fabric using screen and Block using pigment / reactive / direct dyes.
- 3.2 Tie and dye of given fabric using reactive colors
- 3.3 Batik printing and Spray printing for the given fabric

Unit – 4

Production of garments by using the learned concept of dyeing, Tie and dye and batik on components of garments. (Student should select his product to be designed, prepare the pattern as per the dimensions, use the above techniques for creating value and after the process, stitch the garment and present the same to the examiners for Evaluation).

II SEMESTER

COURSE TITLE: CREATIVE DESIGNING

COURSE CODE: 07BMSFR19212	CIA Marks: 40
CREDIT: 4	ESE Marks: 60
No of lecture Hours. / Week: 04	Total no. of Lecture Hours: 60

Objective:

- To examine the role of dress and fashion in different societies and cultures
- Applying the knowledge of clothing through the previous centuries to influence the sense of design for the contemporary period, using underlying symbolism of textiles motifs and colours
- To define fashion and its relation to the arts and function in society using an interdisciplinary approach including literary and artistic sources.

Unit – 1

- 1.1 Introduction to traditional and contemporary designs: Design profile of traditional and contemporary design, creating new textures and sketching of traditional and contemporary design using different mediums.
- 1.2 Thematic process of motif development: Sources for basic sketching and painting. Inspiration from traditional and contemporary designs: Nature, religion mythology, art, crafts, architecture, historical textiles, paintings from various countries and cultures. Process of motif development: Geometrical, stylized and abstract, enlargement and reduction, various types of repeats and placements for various applications.
- 1.3 History of textiles and clothing (before Christ) a brief overview. History of fashion and textiles in the first millennium.
- 1.4 Industrialisation and clothing, Individuality, Modern Dress and textiles.

Unit – 2

- 2.1 Dress and culture during the Gothic, Renaissance and Baroque period.
- 2.2 Clothing in the Indian subcontinent (Ancient period to Mughal) changes from draped to stitched garments. Emphasis on jewellery and accessories.
- 2.3 Colonial influence on Indian Dress.

Unit – 3

- 3.1 The rise of France as a fashion capital, French clothing and its influence on British and American clothing.
- 3.2 Clothing and textiles in China, Japan and Indonesia.
- 3.3 Clothing in the 19th & 20th century – western; Etiquette and clothing.

Unit – 4

Fashion designers, History and look into design concepts of famous designers, both Indian and International.

Reference books:

- Sara Pendergast and Tom Pendergast, eds., Fashion, costume, and culture, Vol.3: Vol.4, Vol.5, Publication - Thomson Gale, 2004.
- Taishi Hirokawa, Fashion: history from the 18th to the 20th Century, Taschen,1975.
- Elizabeth Ewing, and Alice Mackrell, rev. History of 20th century fashion, publ B.T. Batsford, 2005.
- Allen and Seaman, "*Fashion drawing-The Basic Principles*", B. T Batsford, London, 1994.
- Chijiwa, Hideaki, "*Colour harmony*", Rockfort publisher, USA, 10111 edition,
- Nicholas, "*Fashion illustrations*", Thames and Hudson, London, J 9946. Nicholas, "*Fashion illustrations*", Thames and Hudson, London, J 994
- Tortora, Phyllis G and Eubank, Keith Survey of historic costume publ Fairchild Publications, 1993.
- Drake and Ireland, Patrick *John*, "Fashion Design Drawing and Presentation", B. T, Batsford, London, 1996
- Nicholas, "*Fashion illustrations*", Thames and Hudson. London, J 994
- Seamn, Julian, "*Professional Fashion Illustration*". B. T. Batsford, London, 1995

PRACTICALS

COURSE CODE: 07BMSFR19212 (P)	CIA Marks: 20
CREDIT: 2	ESE Marks: 30
No of lecture Hours. / Week: 02	Total no. of lab sessions - 15

Unit - 1

- 1.1 Paper presentation on any one culture in the Before Christ area. Design a portfolio of 10 contemporary designs based on that area.(designs should include five casual and five formal wear garments)
- 1.2 Gothic / Renaissance / Baroque. Ten designs on women's wear /menswear based on any one

Unit – 2

- 2.1 Paper presentation on dress/textiles in Gupta to Mughal period in India.
- 2.2 Collection of ten women's wear garments and ten menswear garments inspired by Mughal period.
- 2.3 Paper suggested on French society. 10 designs based on French clothing.
- 2.4 China, Japan and Indonesia- a collection of ten designs based on any one period from these cultures

Unit – 3: Designer look book preparation

- 3.1 Preparation of Collages and Portfolio Boards.
- 3.2 Developing product specifications for different products within the range. Market communication, launching the product, monitoring the market performance.
- 3.3 Developing a strategy to introduce new products, using market gaps as competitive edge, cost considerations and profitability of new products.

3.4 Developing a product plan and product mix, price policy, positioning the company, product positioning, planning for future position. Evolving a design brief by interlinking with market/product plan.

Unit – 4

- 4.1 Detailed study of the work of any one fashion designer from India and abroad and a collection of ten garments based on his/her work.
- 4.2 Develop an exhibition of garments based on a common historical theme.
- 4.3 Develop two garments each with a paper on the research behind the antecedents of each design.

II SEMESTER

COURSE TITLE: GARMENT CONSTRUCTION - 2

COURSE CODE: 07BMSFR19213	CIA Marks: 40
CREDIT: 4	ESE Marks: 60
No of lecture Hours. / Week: 04	Total no. of Lecture Hours: 60

Objective:

- To endow students with the advanced apparel production process and systems.
- To make the students aware of developments in apparel industrial engineering concepts.
- To emphasis on the improved methods of material control in apparel production
- To acquaint student with quality concepts for implementing quality in apparel production
- To familiarize students with apparel costing methods and techniques.

Unit – 1

- 1.1 Introduction to apparel industrial engineering concepts: Evolution of industrial engineering, scope of industrial engineering in global perspective, IE interface with apparel production.
- 1.2 Work study: Method study approach, work measurement; tools and techniques, principles of motion economy, ergonomics, SAM calculation methods, work elements, basic motion elements, predetermined motion time standards, micro and macro motion charts; operation process chart, flow process chart, string diagram, efficiency indices.
- 1.3 Line planning: Line requirement parameter considerations based on type of apparel product, SAM, order quantity, lead time, factory efficiency. Men and machine requirements planning, batch setting, line balancing concepts, Identification of bottle necks and critical area: Operation wise machinery allocation, Operation break down and production sequence.
- 1.4 Production set up planning for a shirt factory: Production set up planning for a bottoms and jacket factory; Production set up planning for a fully integrated apparel manufacturing plant

Unit – 2

- 2.1 Production plant layout and material handling: Principles of plant layout, plant layout considerations; integration of workmen, material and machines, minimum movement, safety measures, maximum visibility, material handling techniques - application of advanced material handling equipments to eliminate non productive movements, minimum handling of materials.

- 2.2 Productivity management: Overview of productivity measures, measuring labour productivity, machine productivity & value productivity, strategies to improve productivity, factors affecting productivity, balancing productivity and quality. Performance appraisal (PA): Analysis and development, criteria for PA, techniques of PA, employee turnover, absenteeism, attrition and retention, industrial hygiene and safety standards.
- 2.3 Operator training and development: Classification of sewing operators, need based training- primary and secondary training, training modules, multi skilled operator development, adaptation of performance improvement methods, reasons of training failure, retraining on low performance key areas, improving effectiveness of training.
- 2.4 Breakdown of operation sequence – Development of Flow process - Grid chart for operation sequence. Production grid and flow chart. Technical design reading, Tech pack analysis & objective, creating tech pack.

Unit – 3

- 3.1 Emerging trends in apparel production concepts: Lean manufacturing concepts, lean principles, six sigma, theory of constraints (TOC), lean tools; muda, just in time, 5s, total productive maintenance (TPM), kanban, kaizen, KPI, poka yoke, PCDA, SMED, value stream mapping, tact time calculation, root cause analysis.
- 3.2 Innovative trends and challenges in apparel production: IT applications in capturing motion economy and time measurement, lowering energy consumption and minimizing environmental impact.
- 3.3 Quality planning: Quality procedures; Production meetings: Preproduction meetings; In process quality inspection, objectives methods, advantages, inspection methodology, final inspection, random inspection, general inspection method for shirts, trouser and kids garments. Quality control in product development, quality control in printing, embroidery, washing and other accessories.
- 3.4 Final inspection, concept of AQL: Rescreening conditions

Unit – 4: Apparel Costing

- 4.1 Cost accounting: Classification of cost elements - direct and indirect. Determination of factory cost, administration cost and sales cost of an apparel product, accounting for factory overhead. Manufacturing cost account statement - preparation and analysis, cost behavior patterns – fixed, variable, semi variable. Calculations related to job order costing and process costing.
- 4.2 Determining pricing of apparels: Price elasticity of demand and supply, Sample costing - marginal revenue and marginal cost. Pricing methods: Cost plus pricing methods / full cost pricing, conversion cost pricing, differential cost pricing; variable cost pricing, direct cost pricing.
- 4.3 Determination of standard cost for weaving, knitting and processing cost of woven/knitted fabrics. Fabric cost – stripe/ checked, printed and embroidery and special finished goods. CM, CMT cost analysis for various styles. Derivation of cost of apparel products - woven / knits. Cost analysis for various styles of garments. FOB / CIF / C&F pricing of apparels.
- 4.4 Budgeting process: Budgeting principles for the apparel industry, fixed vs. flexible budget, master budget, limitations of budgets. Project proposal for setting up a new garment unit.

References:

- Ruth E. Glock, Grace I. Kunz, “Apparel Manufacturing, Sewn Product Analysis”, Fourth Edition, Pearson Education.
- Janace Bubonia. “Apparel Production Terms and Processes”, Fairchild Books, 2nd

Edition, 2011.

- Grace I. Kunz “Going Global: The Textile and Apparel Industry”, Fairchild Books, 2nd Edition, 2011.
- Paula J. Myers-McDevitt, “Apparel Production Management and the Technical Package” Bloomsbury Academic, 2010.
- Eberle, Hannelore, “Clothing technology: from Fibre to Fashion, Verlag Europa-Lehrmittel, Nourney, Vollmer GmbH & Co., 5th Edition, 2008.
- Richard D Irwin, “Principles of Cost Accounting: Managerial Applications”, Excel books, India, 2001.
- Harold Carr & Barbara Latham, the Technology of Clothing Manufacture, Oxford Pub. USA, 1994.
- Rajesh Bheda, Managing productivity in the Apparel Industry, CBS pub., New Delhi.

PRACTICALS

COURSE CODE: 07BMSFR19213 (P)	CIA Marks: 20
CREDIT: 2	ESE Marks: 30
No of lecture Hours. / Week: 02	Total no. of lab sessions - 15

Unit – 1

1.1 Construction of basic Salwar, Churidar.

1.2 Criteria for selection of the material – Lining, Interlining, Shoulder pads.

Unit – 2

2.1 Drafting and Adaptation Techniques involved in preparation of patterns for Men’s wear- Shirt and Waist Coat.

2.2 Construction of Shirt and waist coat.

2.3 Grading of the above developed patterns.

Unit – 3

3.1 Development of pattern for classic jacket.

3.2 Construction of classic jacket.

Unit – 4

4.1 Design and Development of Ethnic Indian garments – A-Line Kurta, Princess Line and Empire Waist garments.

4.2 Construction of women’s / men’s trouser.

II SEMESTER

COURSE TITLE: SURFACE ORNAMENTATION AND ACCESSORY DESIGNING

COURSE CODE: 07BMSFR19214 (P)	CIA Marks: 20
CREDIT: 2	ESE Marks: 30
No of lecture Hours. / Week: 02	Total no. of lab sessions - 15

Objectives:

- To introduce and train students on value addition aspects.
- To enable students to learn methods of value addition using different techniques

Unit – 1

- 1.1 Introduction to value addition techniques through weaves, prints, embroidery and painting techniques.
- 1.2 Develop designs using different types of weave designs, print, and painting.

Unit – 2

- 2.1 Embroidery: Line Stitches, Flat Stitches, Loop Stitches and Knotted Stitches
- 2.2 Developing samples of traditional embroideries of India.
- 2.3 Market Survey for value addition and surface ornamentation samples and pricing, with respect to value addition, ornamentation and develop a folio.

Unit – 3

- 3.1 Decorative Techniques: Appliqué, Patch work, Quilting, Cut work, drawn thread work, Bead and Sequins work, Zardozi embroidery, Ribbon embroidery, and smocking.
- 3.2 Special Techniques: Braiding, Hooking, Macrame, Tatting, Ari / Adda work.

Unit - 4

- 4.1 Sketching and rendering of belts, gloves, hats, bags and construction of any one.
- 4.2 Sketching of Indian jewellery: Mughal Jewellery, Thewa, Kundan Jewellery, Temple Jewellery and construction of contemporised design inspired by traditional Indian jewellery.
- 4.3 Port folio of accessory materials: Beads, stones, fabrics, threads, fasteners.

II SEMESTER

COURSE TITLE: BUSINESS RESEARCH METHODOLOGY

COURSE CODE: 07BMSFR19213	CIA Marks: 40
CREDIT: 4	ESE Marks: 60
No of lecture Hours. / Week: 04	Total no. of Lecture Hours: 60

Objective:

- The objective of the course is to equip the students with the concept and methods of Business Research. The students will be able to plan, design and earn out business research using scientific methods and prepare research report(s) / paper (s).

Unit – 1

- 1.1 Business Research - Meaning, types, process of research- management problem, defining the research problem, formulating the research Hypothesis, develop the research proposals, research design formulation, sampling design, planning and collecting the data for research, data analysis and interpretation. Research Application in business decisions, Features of good research study.
- 1.2 Types of Business Research Design - Exploratory and Conclusive Research Design, Exploratory Research: Meaning, purpose, methods –secondary resource analysis, comprehensive case methods, expert opinion survey, focus group discussions. Descriptive Research - Meaning, Types. Experimental research design – Meaning and classification of experimental designs - Pre experimental design, Quasi-experimental design, True experimental design, statistical experimental design. Observation Research – Meaning – Uses – Participation and Non-participation – Evaluation– Conducting an Observation study – Data collection.

Unit - 2

- 2.1 Sampling – Concepts, Types of Sampling - Probability Sampling – simple random sampling, systematic sampling, stratified random sampling, cluster sampling - Non Probability Sampling– convenience sampling- judgmental sampling, snowball sampling- quota sampling – Errors in sampling.
- 2.2 Data Collection - Primary and Secondary data, Primary data collection methods - Observations, survey, Interview and Questionnaire, Qualitative Techniques of data collection. Questionnaire design – Meaning - process of designing questionnaire. Secondary data -Sources – advantages and disadvantages
- 2.3 Measurement and Scaling Techniques: Basic measurement scales-Nominal scale, Ordinal scale, Interval scale, Ratio scale. Attitude measurement scale - Likert's Scale, Semantic, Differential Scale, Multi-Dimensional Scaling. Editing, Coding, Classification, Tabulation, Validation, Analysis and Interpretation.

Unit - 3

- 3.1 Hypothesis testing: meaning, types - Null and alternative hypothesis, characteristics, source, Formulation of Hypothesis, level of significance.
- 3.2 Hypothesis Parametric and Non Parametric Test: one and two sample tests (T-Test, Z-Test, F-Test), ANOVA.
- 3.3 Statistical Analysis: Measures of central tendency, measures of variation, measures of dispersion and skewness, test of randomness, Bivariate Analysis (Chi-Square), Multivariate Analysis - correlation regression analysis
- 3.4 Working with statistical packages.

Unit – 4

- 4.1 Importance of report writing, types of research report, report structure, guidelines for effective documentation. Identify the problem and collect relevant literatures and data for analysis.
- 4.2 Data Interpretation and report writing: Short and Long reports. Report presentation methods, ex: Power Point Presentation, etc

References:

- C R Kothari, Vishwa Prakashan , *Research methodology*, 2002
- Donald R. Cooper & Pamela s Schindler *Business research methods.*, TMH/9e/2007
- SL Gupta and Hetesh Gupta, *Business research methods*, McGraw hill – 2012
- Naresh K Malhotra, *Marketing research*, Pearson Education /PHI/5e/2007
- J K Sachdeva, *Business research methodology*, HPH-2e-2011
- William M C Trochi, *Research methods*, Biztantra, 2/e, 2007
- O R Krishnaswami, M Ranganatham *Methodology of research in social sciences*, HPH, 2007
- Deepak Chawla and Neena Sondhi, *Research methodology – concepts and cases*, Vikas Publication – 2011
- C Murthy, *Research methodology*, Vrinda Publication – 2011