

AC _____
Item No. _____

UNIVERSITY OF MUMBAI



Syllabus for Approval

| | | |
|---|--------------------------------------|--|
| 1 | Title of the Course | B. Sc. (Home Science) Branch III: Textiles & Fashion Technology Semesters V and VI |
| 2 | Eligibility for Admission | <ul style="list-style-type: none">• S.Y.B.Sc. Home Science (general or any specialization)• Admission will be based on merit. |
| 3 | Passing Marks | 40% (Theory) and (Practical) |
| 4 | Ordinances / Regulations (if any) | O. 6086 with effect from 2014-15 and thereafter |
| 5 | No. of Years / Semesters | 1 year/ 2 Semesters |
| 6 | Level | P.G. / U.G./Diploma / Certificate (Strike out which is not applicable) |
| 7 | Pattern | Yearly / Semester (Strike out which is not applicable) |
| 8 | Status | New / Revised (Strike out which is not applicable) |
| 9 | To be implemented from Academic Year | From Academic Year <u>2017-18</u> |

Date: 10.04.2017

Signature :

Name of BOS Chairperson / Dean : Dr Geeta Ibrahim

UNIVERSITY OF MUMBAI



Essentials Elements of the Syllabus

| | | |
|---|--|---|
| 1 | Title of the Course | B. Sc. (Home Science) Branch III: Textiles & Fashion Technology Semesters V and VI |
| 2 | Course Code | USHSIII |
| 3 | Preamble / Scope The B.Sc. in Home Science specializing in Textiles and Fashion Technology is designed to impart knowledge and skills that is life oriented, career and community oriented. It has special relevance to Textile, Apparel and Fashion industries with additional knowledge and experience in entrepreneurship skills, weekly field work, rural camp, industrial visits, computer aided designing, marketing and hard skills in Textile and Fashion Technology related areas. Internship is encouraged after the completion of the course. Objective of Course / Course Outcome | |
| 4 | <ul style="list-style-type: none">• To equip students with the knowledge of basic chemistry and application of of Fibres, Dyes, Finishes and other auxiliaries used in the Textile and Apparel Industry.• To impart students a systematic approach to basic and applied aspects of Textiles and Fashion Technology.• To familiarize students with the various theoretical and practical aspects of Textile and Apparel quality Assurance.• To encourage students to work in conjunction with relevant textile and Apparel Industry to get a deeper insight into the subjects of Textiles and Fashion Technology.• To provide students with an opportunity to conduct independent research.• To equip students to design and produce garments based on needs of the industry and the market. Eligibility <ul style="list-style-type: none">• S.Y.B.Sc. Home Science (general or any specialization)• Admission will be based on merit as per norms of the University of Mumbai Fee Structure | |

**T.Y.Sc. (HOME SCIENCE) DEGREE COURSE IN
TEXTILES & FASHION TECHNOLOGY**

PROPOSED FEE STRUCTURE 2017-2018

| No. | Particulars of the Fees | Amounts |
|-----|----------------------------|----------------|
| 1 | Tuition | 800.00 |
| 2 | Laboratory | 800.00 |
| 3 | Library | 200.00 |
| 4 | Gymkhana | 400.00 |
| 5 | Other/Ext.Curr.Act.Fees | 250.00 |
| 6 | Group Insurance | 50.00 |
| 7 | Magazine Fees | 100.00 |
| 8 | Identity Card/Library Card | 50.00 |
| 9 | Students welfare Fund | 50.00 |
| 10 | Utility Fees | 250.00 |
| 11 | Development Fund | 500.00 |
| 12 | Exam fees | 2120.00 |
| 13 | Vice Chancellor's Fund | 20.00 |
| 14 | E. Charges | 20.00 |
| 15 | Ashwamedha/Indradhanushya | 30.00 |
| 16 | Disaster relief fees | 10.00 |
| 17 | E. Services | 50.00 |
| 18 | Convocation Fees | 250.00 |
| 19 | National Services Scheme | 10.00 |
| 20 | Field trips/Activities | 1000.00 |
| | | |
| | | Total |
| | | 6960.00 |

*** FEES ARE DUE TO BE REVISED**

| | | |
|-----------|---|----------------------------|
| 7 | No. of Lectures | 15 periods per week |
| 8 | No. of Practical | 23 periods per week |
| 9 | Duration of the Course | 1 year |
| 10 | Notional hours | 15 periods per week |
| 11 | No. of Students per Batch: 30-40 (Theory) & 15-20 (Practical) | |
| 12 | Selection- Merit at the qualifying examination | |
| 13 | Assessment- included in the syllabus copy as Scheme of Examination | |
| 14 | | |

T.Y.B.Sc (Home Science)

| | |
|-----------|---|
| 15 | Syllabus Details – included in the syllabus copy |
| 16 | Title of the Unit – included in the syllabus copy |
| 17 | Title of the Sub-Unit – included in the syllabus copy |
| 18 | Semester wise Theory – included in the syllabus grid |
| 19 | Semester wise List of Practical – included in the syllabus grid |
| 20 | Question Paper Pattern – included in the syllabus copy as Scheme of Examination |
| 21 | Pattern of Practical Exam – included in the syllabus copy as Scheme of Examination |
| 22 | Scheme of Evaluation of Project / Internship- – included in the syllabus copy |
| 23 | List of Suggested Reading – included in the syllabus copy |
| 24 | List of Websites – included in the syllabus copy wherever applicable |
| 25 | List of You-Tube Videos –Not Applicable |
| | List of MOOCs –Not Applicable |

| Branch III: Textile & Fashion Technology Semester V Revised w.e.f. June 2017 | | | | | | |
|---|--|----------------------------------|----------------------------------|--------------------|------------------------|----------------|
| Course Code | Title | Internal Assessment Marks | Semester end Examinations | Total Marks | Period per week | Credits |
| USHSI501 | Woven Fabric Structure & Construction | 25 | 75 | 100 | 3 | 2 |
| USHSI502 | Textile & Garment Processing, Colouration & Finishing | 25 | 75 | 100 | 3 | 2 |
| USHSI503 | World Historic Textiles | 25 | 75 | 100 | 3 | 2 |
| USHSI504 | Fashion Studies | 25 | 75 | 100 | 3 | 2 |
| USHSI505 | Textile & Apparel Marketing | 25 | 75 | 100 | 3 | 2 |
| USHSIIP501 | Woven Fabric Structure & Construction | — | 50 | 50 | 4 | 2 |
| USHSIIP502 | Textile & Garment Processing, Colouration & Finishing | — | 50 | 50 | 4 | 2 |
| USHSIIP503 | Indian Traditional Embroidery | — | 50 | 50 | 3 | 2 |
| USHSIIP504 | Pattern Making & Garment Construction - Women's wear | — | 50 | 50 | 4 | 2 |
| USHSIIP505 | Project work I- Commercial Contemporary Product /Service Development | — | 50 | 50 | 4 | 2 |
| USHSIIP506 | Project work II - Sustainable Community Work | — | 50 | 50 | 4 | |
| | | 200 | 600 | 800 | 38 | 20 |

*The candidate is required to submit the certificate of completing One Year Diploma course in : “CAD, CAM and Computer Technologies in the Apparel Industry - Basic” before completion of B.Sc. (Home Science) course.

| Course Code | Title | Periods/week/ Division | Marks | Credits |
|-------------|---------------------------------------|---------------------------|-------|---------|
| USHSIII501 | Woven Fabric Structure & Construction | 3 | 100 | 2 |

Objectives

1. To help students learn various fabric construction techniques with reference to consumer and technical textiles.
2. To help students to understand the creation of basic and complex weaves including other methods of creating visual effects.
3. To familiarize students with the various knitted, non-woven and knotted fabrics.

| Course Content | | Periods |
|----------------|--|---------|
| Unit I | Fabrics made from Fibers, Yarns and Non-Fibrous materials – Properties and Uses Weaving – Introduction, Loom – Parts, Mechanism and Types, Types of Drafts | 15 |
| Unit II | Elementary weaves – plain, twill and satin – its derivatives, properties and uses | 15 |
| Unit III | Complex weaves: huck-a-back, honeycomb, mock leno, bed ford cord, welt and pique, extra warp and weft, color and weave effects, their properties and use. Recent advances in weaving | 15 |

References

- Black, M.E. (1966). *The key to weaving* New York: Macmillan.
- Brown, R. (1978). *Weaving, spinning and dyeing book*. London: Routledge&Kegan Paul.
- Corbman, B. P. (1983) *Fibre to Fabric* step by step weaving (6th Ed.) New York: McGraw Hill.
- Fannin&Allen.A.(1979).*Handloom weaving technology*. New York: Van Nostrand Reinhold.
- Grosicki, Z. J. (1980). *Watson's textile design and color*. London: Newness Butterworths.
- Hollen, Norma. (1988). *Textiles*. (6th Ed) New York: Macmillan publishing company.
- Kishore, Punett. (1990). *Weaving technology in India – Jacquards*. New Delhi.
- Kulkarni, M. M. (1998). *Weaving technology*.Jalgaon: Vrinda publications.
- Murray, R. (1981). *The essential handbook of weaving*. London: Bell and Hyman.
- Nisbet, H. (1978). *Grammar of textile design*. Bombay: Taraporewala Sons.
- Oelsner, G. H. (1982). *A handbook of weaves*, New York: Dover.
- Plath, I. (1972). *The craft of hand-weaving*. New York: Clark's Scribner's Sons.
- Sengupta, R. (1982). *Weaving calculations*.Bombay: D.B. TaraporewalaSons.
- Singh, R.B. (1989). *Modern Weaving: Theory and Practice*. Ahmedabad: Mahajan.
- Teh, M.D. (1997). *Weaving of specialist fabrics*. Mumbai: Textile Associat5ion of India
- Thrope, A. (1970). *Elements of weaving: A complete introduction to the art and techniques*. New York: Doubleday.
- ZnamieRowski, Nell. (1973). *A complete introduction to the craft of weaving*. London: Pan Bookes Ltd.

| Course Code | Title | Periods/week/ Division | Marks | Credits |
|-------------|--|---------------------------|-------|---------|
| USHSIII502 | Textile & Garment Processing, Colouration & Finishing (Theory) | 3 | 100 | 2 |

Objectives

1. To create awareness of the different techniques used for coloration and finishing of textiles.
2. To gain knowledge of Chemistry of dyestuff and printing pigments, their application, processes machines for different fabrics and their fastness properties.
3. To make students aware of recent developments in dyeing, printing and finishing with emphasis on ecological concerns.

| Course Content | Periods |
|---|---------|
| <p>Unit I</p> <p>Preparatory processes for gray fabric: Open width, Rope form, Continuous and Batch Finishing, De-sizing, Scouring, Bleaching, Mercerization</p> <p>Color and light relationship and dye constituent</p> <p>Dyes and pigments: classification of dyes and pigments based on application and chemical structures</p> <p>Color Index and color matching</p> <p>Dyeing: Introduction to dyeing, Principles of dyeing, Methods of dyeing (dope, fiber, yarn, fabric and garment), Study of auxiliaries used for dyeing, Mechanism of various dyeing processes, application of dyes on various fibers/fabrics, fastness properties and toxicity factors of following dyes:</p> <p>Synthetic Dyes: (Direct, Azoic, Basic, Vat, Solubilized vat dyes, Sulphur, Acid, Mordant, Natural, Reactive and Disperse)</p> <p>Natural Dyes: (Classification, their application and ecological concern)</p> <p>Garment dyeing</p> <p>Evaluation of fastness properties of dyed textile material</p> <p>Ecological aspects of dyeing (Banned dyes and banned chemicals for dyeing, eco-friendly chemicals, auxiliaries and etc.)</p> <p>Recent developments in dyeing & preparatory processes</p> | 15 |
| <p>Unit II</p> <p>Printing</p> <p>i. Introduction to printing</p> <p>ii. Styles of printing</p> <p>iii. Methods of printing</p> <p>iv. Study of auxiliaries used for dyeing and printing</p> <p>Novel methods of printing: Digital, flexography, inkjet, blotch, water mark, roller, foam, bubble, air brush, electrostatic, photo printing, marble, warp printing, differential and etc.</p> <p>Specialty printing: Rubber, khadi and etc.</p> <p>Evaluation of fastness properties of printed textile material</p> <p>Ecological aspects of printing process (Banned chemicals for printing, eco-friendly chemicals, auxiliaries and etc.),</p> <p>Recent developments in printing & preparatory processes</p> | 15 |
| <p>Unit III</p> <p>Finishing</p> <p>i. Aims of finishing</p> | 15 |

| | | |
|--|---|--|
| | ii. Classification of finishes (physical and chemical) iii. Recent developments Garment Finishing Ecological aspects of finishing process (Banned chemicals for printing, eco-friendly chemicals, auxiliaries and etc.), Recent developments in finishing & preparatory processes Effluent treatments. | |
|--|---|--|

References

- Cegarra, J. P. and Valladperas, J. (1992). *The dyeing of textile manual, the scientific bases and the techniques of application*. Italy: NecovaOfrito.
- Ponting, K. G. (1981). *A dictionary of dyes and dyeing*. London: Bell and Hymen Ltd.
- Rouette, H. K. (2001). *Encyclopedia of textile finishes*. Berlin: Springer Verlag.
- Shenai, V. A. (1985). *Technology of dyeing: Technology of textile processing*. Vol.VI.,Mumbai: Sevak Publication.
- Shenai, V. A. (1985). *Technology of printing: Technology of textile processing*. Vol. IV ,Mumbai: Sevak Publication.
- Shenai, V. A. (1998) *Toxicity of dyes and intermediates*.Mumbai: Sevak Publication.
- Shenai, V. A. (1999). *Azo dyes: Facts and figures*. Mumbai: Sevak Publication.
- Story, J. (1985). *The Thames and Hudson manual of textile dyes and fabrics*. London: Thames and Hudson.
- Story, J. (1985). *The Thames and Hudson manual of textile printing*. London: Thames and Hudson.
- Burkinshaw, S. M. (1995). *Chemical principles of synthetic fiber dyeing*. Glasgow: Blackie Academic and Professional.
- Vigo, T. L (1997). *Textile processing and properties, preparation, dyeing finishing and performance*.Amsterdam: Elsevier Sciences.
- Lewis, D.M. (Ed). (1992) *Wool dyeing*. London: Society of Dyers and Colourist.
- Gittenger, M. (1982) *Master dyers of the world*. Washington: The Textile Museum.
- Shenai, V. A. and Saraf, N. (1991) *Dictionary of textiles*.Mumbai: Sevak Publication.
- Prayag, R. S. (1989). *Dyeing of wool, silk and man made fibres*. Dharwad: Noves Data Corporation.
- Srivastav, S. B. *Recent process of textile bleaching, dyeing and finishing*. New Delhi: SBP Consultants and Engineers.
- Gulrajani, M. L. and Gupta, S. (1990) *Wool dyeing and printing*. New Delhi: Department of Textile Technology IIT.
- David G, Snclair, Roy, S. (1989). *Giles laboratory course in dyeing* (4th Ed.) London: Society of Dyers and Colourist.
- Koshy, T. D. (2001). *Silk production and export management*. New Delhi: A.P.H Publishing Corporation.
- Colliner, B. J & Tortora P. G. (2001) *Understanding Textiles*. (6th Ed.) Upper Saddle River, N. J: Prentice Hall Inc.
- Corbman, B. P. (1983). *Textiles: Fibre to Fabric* (6th Ed.) New York: McGraw Hill.
- D'Souza, N. (1998). *Fabric Care*. India: New Age International.
- Deulkar, D. (1976). *Household Textiles and Laundry Work*. Delhi: Atmaram Sons.
- Joseph, M. L. (1986) *Introductory textile science* (5th Ed.) New York: Holt, Rinehart and Winston.
- Marsh, J. T. (1979) *Introduction to Textile Finishing*, Mumbai: BI Publication
- Kadolph, Langford, Hollen& Saddler (1993) *Textiles*. New York: Macmillan.
- Rouette, H. K. (2001). *Encyclopedia of Textile Finishing*. Vol I, II & III Berlin: Springer.
- Wynne, A. (1997). *Textiles: Motivate Series*. London: Macmillan Company.

| Course Code | Title | Periods/week/ Division | Marks | Credits |
|-------------|----------------------------------|---------------------------|-------|---------|
| USHSIII503 | World Historic Textiles (Theory) | 3 | 100 | 2 |

Objectives

1. To acquaint the students with the rich heritage of textiles of the world.
2. To acquaint the students with the care and preservation of textiles.

| Course Content | | Periods |
|----------------|--|---------|
| Unit I | Care and Preservation of textiles Textiles of the ancient world Mediterranean Central & Northern Europe Western Europe : Italian, Spanish and French | 15 |
| Unit II | The Near and Middle East: Sassanian textiles; early Islamic textiles, Byzantine silks, Central Asian textiles The Far East : China & Japan | 15 |
| Unit III | Textiles of America: Colonial North America, Native North America & Latin American English and American textiles: Basic cloth, Revolution Exuberance and Renaissance | 15 |

References

- Boucher F. (1987) *2000 years of fashion: The history of costume and personal Adornment*, New York: Harry and Abrams Inc. publishers.
- Dar, S. N. (1969) *Costumes of India and Pakistan*, D. B. Taraporewala Sons & Co, Bombay
- Doreen Y. (1992) *Fashion in the western world, 1500-1900*, B T Batsford Ltd, London.
- Fas, (1997) *Fashion Design 1850-1895*, The Pepin Press, Amsterdam.
- Harris, J (1993) *5000 years of Textiles*, British Museum, London.
- Hart, A (1998) *Historical Fashion in Detail- The 17th and 18th Centuries*, V & A Publications, London.
- Hill M H. (1987) *The Evolution of Fashion 1066 to 1930*, B T Batsford Ltd, London.
- LehnertGertoud, 2000, *A history of Fashion in the 20th Century*, KonemannVerlagsellschaftMbh, Cologne.
- Peacock J. (1993) *20th Century Fashion - The Complete Source Book*, Thames and Hudson Ltd., London.
- Peacock J. (1997) *Fashion Source book- The 1930's*, Thames and Hudson Ltd., London.
- Peacock J. (1997) *Fashion Source book- The 1950's*, Thames and Hudson Ltd., London.
- Peacock J. (1997) *Fashion Source book- The 1970's*, Thames and Hudson Ltd., London.
- Peacock J. (1998) *Fashion Source book- The 1960's*, Thames and Hudson Ltd., London.
- Racinet, A (1998) *The Historical encyclopedia of costumes*, Studio editions, London.Illustrat.
- Racinet, A (2000) *The history of European Costume: Period, Styles and Accessories*, London: Collins and Brown Ltd.
- Rocinet A (2006) *The Complete Costume History*, Taschen, Koln.
- Rothstein, N (ed) (1984) *Four Hundred years of Fashion*, V & A Publications, London.
- Seetling C, (2000) *Fashion The Century of the Designer 1900-1999*, KonemannVerlagsellschaftMbh, Cologne.
- Turner, W. R. (1989) *Folk and Festival Costumes of the World*, B T Batsford Ltd., London.

| Course Code | Title | Periods/week/ Division | Marks | Credits |
|-------------|-----------------|---------------------------|-------|---------|
| USHSIII504 | Fashion Studies | 3 | 100 | 2 |

Objectives

1. To understand the basics of fashion design.
2. To provide knowledge of the Indian and global fashion industry.

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | <p>Fashion Development (Ch1 Fringes) Timeline Of Clothing Of Draped Style Of Early Civilization Till Stitched Style Of 21st Century, Indian Costume- Vedic And Mughal</p> <p>Adoption Of Fashion (Ch3 Fringes) Consumer Groups- Fashion Leaders, Followers Adoption Process- Trickle-Down Theory, Bottom Up Theory & Trickle Across Theory</p> <p>Fashion Forecasting (Ch4 Fringes) Forecasting Background , Forecasting Industry, Process: Color, Inspiration, Graphics And Labelling, Fabrication And Silhouette, Details, Mood Boards</p> | 15 |
| Unit II | <p>Designing A Successful Garment (Ch2, 3, 4, 5, 6 Tate And Edward) Role Of A Designer , Facets Of Successful Design Aesthetics , Organization Of A Line , Fabricating a Line , Cost Of a Garment.</p> <p>Fashion Centers And Designers Of The World (Ch8 Fringes) France, Italy, UK, Japan, NY India, Spain, Germany, Canada</p> | 15 |
| Unit III | <p>Fashion Design And Retail (Ch8, 9 Tate / Ch13 Fringes) Children's Wear- Selling Seasons, Fibers, Trimmings, Organizing, Size Categories Men's Wear- Current Market Trends, Designing, Merchandising Categories . Types Of Retail Organizations- -Specialty Stores - Department Stores - Mass Merchants -Boutiques And Chain. Non Store Retailing: Mail-Order, E-Tailing .</p> <p>Computer Applications In Fashion Industry (Ch8 CarrAnd Latham)</p> | 15 |

References

Carr H., Latham B. (1994), The Technology of Clothing Manufacture, 2nd edition, Blackwell Sc.
 Fringes G. S. (1994), Fashion from Concept to Consumer, 6th edition, Prentice Hall, New Jersey.
 Tate, S.L. and Edwards, M.S.(1982) The Complete Book of Fashion Design, New York, Harper & Row Publication

| Course Code | Title | Periods/week/ Division | Marks | Credits |
|-------------|---|---------------------------|-------|---------|
| USHSIII505 | Textile & Apparel Marketing (Theory) | 3 | 100 | 2 |

Objectives

1. To help students acquire knowledge and understanding of the basic principles involved in the field of marketing, and market research.
2. To help students understand consumer behavior.

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | Introduction <ul style="list-style-type: none"> • Meaning, nature, role, type and scope of market and merchandising and its importance in the modern economy • Changing profile of market Marketing: 4 P's <ul style="list-style-type: none"> • Product: Product life cycle, standardization and grading, Packaging, Branding and Advertising • Pricing: Policy and economic concepts in pricing, pricing objectives and strategies, Physical Distribution: Different types of distribution channel and their importance • Promotion: Meaning, objective, process of communication, promotion strategies, social aspect of promotion • Place: Distribution, placement strategy, competitors 4 C's: Cost, Consumer, Convenience and Communication Market Research: Market segmentation, scope of market research, steps in the research process, types of market research | 15 |
| Unit II | Consumer psychology and behavior: Consumer decisions in the market process, factors affecting consumer's decision in purchasing, consumer aids for right choice brands, trademarks, quality marks, buying guides with respect to textiles, consumer service | 15 |
| Unit III | Recent Trends Of Textile And Apparel Marketing | 15 |

References

- Berkowitz. K., Hartley, R. (1994) *Marketing*(4th Ed)
- Daver, R. S. Modern (1992) *Marketing Management*_Progressive Corporation
- Diamond E. (2006) *Fashion Retailing*. New Jersey: Pearson Prentice Hall.
- Gandhi, R.S. Mehta, Talele, A.B. (1992) *De-centralized sector of the Indian textile industry*. NICTAS Publication
- Kale, N.G. (1997) *Principles and practices of marketing*. Mumbai: VipulPrakashan.
- Kotler, P. (1998) *Marketing Management*. India: Pretince Hall.
- Sengupta, S. (1990) *Brand positioning strategies for competitive advantage*. Tata McGraw
- Singh (1989).*Marketing and consumer behaviour*. India: Deep & Deep.
- Stanton W.J, Etzel, M.J., &Walker, B.J. (1994).*Fundamental of marketing*. 10th Ed. McGraw Hill

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|---------------------------------------|---------------------|-------|---------|
| USHSIIP501 | Woven Fabric Structure & Construction | 4 | 50 | 2 |

Objectives

1. To source and identify different woven samples for analysis and testing.
2. To construct fabrics through technique of weaving.
3. To orient students to few fabric testing techniques.

| Course Content: | | Periods |
|-----------------|--|---------|
| Unit I | Yarn Testing: Yarn Count and Yarn Twist. | 15 |
| Unit II | Fabric Testing: Calculation of the Weight of Warp and Weft of the Fabric, Fabric Thickness, Fabric Count. | 15 |
| Unit III | Sourcing Of Different Woven Samples Sourcing, collecting and identification of Different Woven Samples | 15 |
| Unit IV | Analysis Of Different Woven Samples: <ul style="list-style-type: none"> • Analysis of Woven Samples for Design, Draft And Peg Plan and Other Particulars (5 Samples Under Each Type Of Weave) • Practical Warping and Weaving of Samples on Table Looms with Straight and Transposed Drafts | 15 |

*Journal / Portfolio

References

- Black, M.E. (1966). *The key to weaving* New York: Macmillan.
- Brown, R. (1978). *Weaving, spinning and dyeing book*. London: Routledge&Kegan Paul.
- Corbman, B. P. (1983) *Fibre to Fabric* step by step weaving (6th Ed.) New York: McGraw Hill.
- Fannin&Allen.A.(1979).*Handloom weaving technology*. New York: Van Nostrand Reinhold.
- Grosicki, Z. J. (1980). *Watson's textile design and color*. London: Newness Butterworths.
- Hollen, Norma. (1988). *Textiles*. (6th Ed) New York: Macmillan publishing company.
- Kishore, Punett. (1990). *Weaving technology in India – Jacquards*. New Delhi.
- Kulkarni, M. M. (1998). *Weaving technology*.Jalgaon: Vrinda publications.
- Murray, R. (1981). *The essential handbook of weaving*. London: Bell and Hyman.
- Nisbet, H. (1978). *Grammar of textile design*. Bombay: Taraporewala Sons.
- Oelsner, G. H. (1982). *A handbook of weaves*, New York: Dover.
- Plath, I. (1972). *The craft of hand-weaving*. New York: Clark's Scribner's Sons.
- Sengupta, R. (1982). *Weaving calculations*.Bombay: D.B. TaraporewalaSons.
- Singh, R.B. (1989). *Modern Weaving: Theory and Practice*. Ahmedabad: Mahajan.
- Teh, M.D. (1997). *Weaving of specialist fabrics*. Mumbai: Textile Association of India
- Thrope, A. (1970). *Elements of weaving: A complete introduction to the art and techniques*. New York: Doubleday.
- ZnamieRowski, Nell. (1973). *A complete introduction to the craft of weaving*. London: Pan Bookes Ltd

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|--|---------------------|-------|---------|
| USHSIIP502 | Textile & Garment Processing, Coloration & Finishing | 4 | 50 | 2 |

Objectives

1. To introduce students to different techniques of coloration of textiles.
2. To make students aware of creative methods in dyeing.
3. To introduce students to dye identification.

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | <ul style="list-style-type: none"> • Preparatory treatments – desizing, scouring and bleaching of samples • Dyeing of fabric samples using machineries (jigger, padding mangle, launderometer and etc) • Preparation of natural dye shade card | 15 |
| Unit II | <ul style="list-style-type: none"> • Identification of dye on various fiber fabrics • Tie-dye techniques and create 4 samples using various fiber content (cotton, nylon, silk, jute, wool and blended) with suitable dye • Creation of batik 2 samples using various fiber content (cotton, silk, blend etc) using suitable dye | 15 |
| Unit III | <ul style="list-style-type: none"> • Printing of different fabric composition using block with various styles (khadi – white and golden, discharge – white and color and blotch) (2 samples) • Making of screen and printing on different fabric composition (1 sample) • Printing on fabric using various techniques marble, air brush and etc (1 sample) • Identification of Printed fabrics | 15 |
| Unit IV | Basic finishes: experiment with any 4 (individual or in combination) | 15 |

*Journal / Portfolio

References

- Clarke, W. (1977). *Introduction to textile printing*. London: Newnes Butterworth.
- Giles, C .H. and others. (1974). *Laboratory course in dyeing*.(3rdEd.). England: Society of Dyers and Colourist.
- Buchler,A. and Ederbard, F.(1977). *Clamp resist dyeing of fabrics*. Ahmedabad: Calico Museum of Textile.
- Shenai, V. A. (1985). *Technology of dyeing: Technology of textile processing*. Vol.VI.,Mumbai: Sevak Publication.
- Kulkarni,S.V.(1986). *Textile dyeing operations*. New Jersey: Noyes Publication.
- David G, Snclair, Roy, S. (1989) *Giles laboratory course in dyeing* (4th Ed.) London: Society of Dyers and Colourist.
- D'Souza, N. (1998). *Fabric care*. India: New Age International.
- Shenai, V. A. (1985). *Technology of printing: technology of textile processing*. Vol. IV., Mumbai:Sevak Publication.
- Rouette, H. K. (2001). *Encyclopedia of textile finishes*. Berlin: Springer Verlag.

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|--------------------------------------|---------------------|-------|---------|
| USHSIIP503 | Indian Traditional Embroidery | 3 | 50 | 2 |

Objective:

1. To orient students to the rich heritage of Indian embroidery
2. To teach manual techniques of traditional embroidery so that they can be adapted to modern trends.

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | Indian embroidery of different states done on samples: a) Kasuti b) Kantha | 11 |
| Unit II | a) ChambaRumal b) Kashidai | 11 |
| Unit III | a) Phulkari b) Zardozi | 11 |
| Unit IV | a) Chikankari b) Gujarat & Rajasthan c) Manipuri | 12 |

*Journal / Portfolio

References:

- Anand M.R., "Textiles & Embroideries of India "Marg Publication Bombay, 1965.
 Chattopadhyay K, " Indian Embroidery", Wiley Eastern Ltd., New Delhi, 1977.
 Lynton Linda, " The Sari", Thames &Hadson,1995.
 NaikShailaja D, " TraditionalEmbroideries of India" APH Publisher Corporation,
 New Delhi, 1996.
 SodhiaManmeet, "Dress Designing", Kalyani publishers, New Delhi.

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|--|---------------------|-------|---------|
| USHSIIP504 | Pattern Making & Garment Construction - Women's wear | 4 | 50 | 2 |

Objectives

1. To teach students how to read elaborate styles and patterns.
2. To equip students with the techniques of advanced pattern designing through flat pattern construction.
3. To acquaint students with the techniques and skills of garment construction through flat pattern.
4. To make students competent to stitch garments with elaborate patterns.

| Course content | | Periods |
|----------------|--|---------|
| Unit I | <ul style="list-style-type: none"> • Basic Blocks: Adults bodice block, torso and dartless sloper, lower block and sleeve block (Revision) using anthropometric measurements. • Dart displacements and concealment techniques. | 15 |
| Unit II | Fundamentals: <ul style="list-style-type: none"> • Collars: Rever, Reversible, Shawl, Danton and Sports, Shirt • Necklines: Raised, Polo and Cowl. • Zips – Fly open, zip without seam | 15 |
| Unit III | Upper wear: (Incorporating Sleeves: Bell, Leg-o-mutton, Butterfly, Cap, Raglan, Drop-shoulder, Magyar sleeves) <ul style="list-style-type: none"> • Katoricholi/ choli (any one) • Tops: top /Shirt with concealment . (any one) | 15 |
| Unit IV | Lower wear: Legwear – skirt /culottes / parallel / pajamas; (any one) | 15 |

*Journal / Portfolio with technical drawings. The garments can be theme based.

- Armstrong method to be used for pattern making and adaptation
- Usha International method to be used for Indian wear pattern making and adaptation

References:

- Pattern Making for Fashion design by Armstrong, Vikas Publishing House Pvt.Ltd. Delhi.
- Armstrong, H (2014) Ed. 5th, *Pattern Making for Fashion Design*. Delhi India: Dorling Kindersley Private Limited,
- Doongaji, S &Deshpande, R. (1968). *Basic Processes and Clothing Construction*. India: New Raj Book Depot.
- McCall's. (1964). *Sewing in Colour*. London: The Hamlyn Publishing Group Ltd.
- Reader's Digest, (1993). *Step by Step Guide: Sewing and Knitting*, Auckland: Reader's Digest.
- Indian Dress designing by Usha International

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|--|---------------------|-----------|----------|
| USHSIIP505 | Part A : Project work I- Commercial Contemporary Product /Service Development | 4 | 50 | 2 |
| | Part B :Project work I- Commercial Contemporary Product /Service Development | 4 | 50 | |

Part A : Project work I- Commercial Contemporary Product /Service Development (Practical)

Objectives

1. To create awareness of the process of product development.
2. To gain knowledge of contemporary products based on traditional crafts.
3. To make students aware of traditional crafts for the preservation of Indian culture.
4. To study commercial production and retailing.

| Course Content | | Periods |
|-----------------------|--|----------------|
| Unit I | Review of Literature on product development | 15 |
| Unit II | Types and Techniques of Indian traditional crafts – Review of literature (on any 3 crafts in depth) | 15 |
| Unit III | Development of contemporary commercial products/ services with the use of traditional crafts (3 products) | 15 |
| Unit IV | To study the marketability of these products / services (consumer survey) To prepare a business project report | 15 |

*Journal to include the entire process. Report to be prepared and presented.

References:

- Barrow Colin, Brown Robert, Clarke Liz, (2006). The Successful Entrepreneurs guide book. London: Kogan and Page.
- Design Methods, Jones, J.C.(1992), Wiley and Sons
- Cradle to Cradle, McDonough, W & Braungart, M(2003), North Point Press
- New Product Development, Robin, K & Nelson, B, Wiley
- Chattopadhyaya, K., Handicrafts of India, All India Handicrafts Board, New Delhi, 1975.
- Threads and voices, Laila Tyabji, Marg Publications, 2007
- Fashioning Fabrics: Contemporary Textiles in Fashion, Elyssa Da Cruz ,Black Dog Publishing, 2006

Part B : Project work II - Sustainable Community Work

Objectives

1. To create awareness of the different techniques in production and marketing.
2. To gain knowledge of sustainable community work through production and marketing of textile craft products.
3. To make students aware of creative products appropriate for community work.
4. To acquire skills for different methods in assessment of textile related skills
5. To prepare and use the various types of communication aids for imparting textile/fashion education.
6. To learn various methods of research and apply it in project development.

| Course Content | Periods |
|---|---------|
| Unit I Review of literature on Products made from Textiles appropriate for community work Visit to relevant GO's and NGO's | 15 |
| Unit II Development of various tools for Textile/Fashion Education such as - powerpoint, short films, etc. Preparation of visual aids like flashcards, brochures, pamphlets, charts etc Developing other techniques like skits, role play, street plays, demonstrations, songs etc Developing data collection tools like survey, questionnaires, interview schedule etc. Implementing the developed tools Conducting mini surveys To analyze and interpret the data collected | 15 |
| Unit III Experimenting with different types and techniques (3 Products) Transfer of the above to under privileged community To conduct textile/fashion education in the field scenario | 15 |
| Unit IV Collecting feedback and incorporating them for further betterment of community where extension has been undertaken | 15 |

- Learning diary/Journal to be maintained for every session and final report to be made and presented.

References:

- Beatley, Timothy, and Kristy Manning. *The Ecology of Place: Planning for Environment, Economy, and Community*. Washington, DC: Island Press, 1997, chapter 1, and 5. ISBN: 1559634782.
- Waldinger, Roger, Howard Aldrich, and Robin Ward. "Opportunities, Group Characteristics, and Strategies." In *Ethnic Entrepreneurs: Immigrant Business in Industrial Societies*. Newbury Park, CA: Sage Publications, 1990, pp. 13-49. ISBN: 0803937113.
- Kinsley, Michael. "Sustainable Development: Prosperity without Growth." In *Economic Renewal* Guide. Old Snowmass, CO: Rocky Mountain Institute, chapter 1. ISBN: 1881071065.
- Kothari C.R. Research methodology- Methods and Techniques, 2nd revised Edition, New Age International Publishers.

- lakely, E., and T. Bradshaw. "Business Development." In *Planning Local Economic Development: Theory and Practice*. Thousand Oaks, CA: Sage Publications, 1994, Chapter 8, pp. 217-235. ISBN: 0803952104.

T.Y.B.Sc. (Home Science)
Branch III: Textile & Fashion Technology
Semester VI
Revised w.e.f. June 2017

| Course Code | Title | Internal Assessment Marks | Semester end Examinations | Total Marks | Period/week/Division/Batch | Credits |
|-------------|---|---------------------------|---------------------------|-------------|----------------------------|---------|
| USHSIII601 | Knitted and Nonwoven Fabric Structure & Construction | 25 | 75 | 100 | 3 | 2 |
| USHSIII602 | Textile Testing & Quality Assurance | 25 | 75 | 100 | 3 | 2 |
| USHSIII 603 | World Historic Costumes | 25 | 75 | 100 | 3 | 2 |
| USHSIII604 | Fashion Grooming and Styling | 25 | 75 | 100 | 3 | 2 |
| USHSIII605 | Textile & Apparel Merchandising | 25 | 75 | 100 | 3 | 2 |
| USHSIIP601 | Knitted and Nonwoven Fabric Structure & Construction | — | 50 | 50 | 4 | 2 |
| USHSIIP602 | Textile Testing & Laundry Science | — | 50 | 50 | 4 | 2 |
| USHSIIP603 | Textile Designing & Fashion Illustration | — | 50 | 50 | 3 | 2 |
| USHSIIP604 | Pattern Making & Garment Construction - Mens wear | — | 50 | 50 | 4 | 2 |
| USHSIIP605 | Part A : Project work- Entrepreneurial Skill Development in Textile & Fashion | — | 50 | 50 | 4 | 2 |
| | Part B : Project work - Sustainable Social Entrepreneurship | — | 50 | 50 | 4 | |
| | | 200 | 600 | 800 | 38 | 20 |

*The candidate is required to submit the certificate of completing One Year Diploma course in : “CAD, CAM and Computer Technologies in the Apparel Industry - Basic” before completion of B.Sc. (Home Science) course.

| Course Code | Title of Paper | Lectures/Week/Division | Marks | Credits |
|-------------|---|------------------------|-------|---------|
| USHSIII601 | Knitted and Nonwoven Fabric Structure & Construction | 3 | 100 | 2 |

Objectives

1. To help students learn various fabric construction techniques with reference to consumer and technical textiles.
2. To help students to understand the creation of basic and complex weaves including other methods of creating visual effects.
3. To familiarize students with the various knitted, non-woven and knotted fabrics.

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | Knits – single, double, raschel, and their variations, properties and uses. | 15 |
| Unit II | Non – wovens and multi components, types, properties and uses including felts | 15 |
| Unit III | Other methods of fabric formation – knotting, tufting and multi components Narrow width fabrics – labels, laces etc. Advances in fabric construction | 15 |

References:

- Ajgaonkar. D.B. (1998) *Knitting technology*, Mumbai: Mumbai Universal publishing corporation
- Hollen, Norma. (1988). *Textiles*. (6th Ed) New York: Macmillan publishing company.
- Nisbet, H. (1978). *Grammar of textile design*. Bombay: Taraporewala Sons.
- Spencer, D. (1989). *Knitting Technology*. Cambridge: Woodhead.
- Nonwoven Fabrics by Wilhelm Albrecht, Hilmar Fuchs (Prof.), Walter Kittelmann, Wiley-VCH, 2003
- Introduction to Nonwovens Technology by BehnamPourdeyhimi and Subhash Kumar Batra, 2012
- Handbook of nonwoven filter medi by Irwin Marshall Hutten, 2007
- Nonwovens: Process, Structure, Properties and Applications by T. Karthik, **aran Prabha K C.**, R. Rathinamoorthy - 2016
- Handbook of Nonwoven Filter Media By Irwin M. Hutten, 2006

| Course Code | Title of Paper | Lectures/Week/Division | Marks | Credits |
|-------------|---------------------------------------|------------------------|-------|---------|
| USHSIII602 | Textile Testing and Quality Assurance | 3 | 100 | 2 |

Objectives

1. To make the students aware of the importance of textile and garment testing and quality control.
2. To impart knowledge of the physical and mechanical properties of textiles and garments.
3. To demonstrate the techniques and principles of testing physical and mechanical properties of textiles and garments.

| Course Content | | period |
|----------------|--|--------|
| Unit I | Fabric dimensions and properties (woven, knitted and non – woven) <ol style="list-style-type: none"> a. Length, width, fabric count, weight and thickness b. Air and water permeability c. Shrinkage d. Wrinkle resistance and crease recovery e. Abrasion resistance and pilling resistance f. Fabric stiffness and drapability g. Flammability | 15 |
| Unit II | Tensile strength <ol style="list-style-type: none"> a. Definitions of stress, strain, initial modulus, elasticity, yield point b. Tensile strength measurement of fiber, fiber bundle, yarn, skein and fabric. c. Tensile strength testing instruments with their working principles of measurements – CRT, CRL and CRE d. Tear strength and bursting strength measurement | 15 |
| Unit III | <ol style="list-style-type: none"> a. Garment testing: seam slippage, seam strength and puckering b. Advances in textile testing and quality Assurance | 15 |

References

- Angappan P. and Gopalkrishnan R., (2002), *Textile testing*, Mumbai: S. S. M. Institute of Technology.
- Booth J. E., (1996), *Principles of textile testing: An introduction to physical methods of testing textile fibers, yarns and fabrics* (6th Ed.). London: NewnesButterworths.
- Collier B. J., (1999), *Textile testing and analysis*, New Jersey: Prentice Hall.
- Grover E. B. & Hamby D. S., (1969), *Handbook of textile testing and quality control*, New Delhi: Wiley Eastern Ltd.
- Handbook of textile testing, Bureau of Indian standards, (1990), *Testing and grading of textile fibers*, Part I, New Delhi: Bureau of Indian Standards.
- Handbook of Textile Testing, (1991), *Testing and grading of textile fibers*, Part III, New Delhi: Bureau of Indian Standards.
- Handbook of Textile Testing, Part IV, *Identification of dyestuff and color fastness on textile materials*. (1989), New Delhi: Bureau of Indian Standards.
- Morton, W. E. & Hearle, J. S., (1975), *Physical properties of textile fibers*, Heinmann: Textile Institute.
- Shenai, V. A., (1980), *Evaluation of textile chemicals*, Mumbai: Sevak
- Skinkle, J. H., (1972), *Textile testing*, Mumbai: Taraporevala.
- Trotman, E. R. & Trotman, S. R., (1948), *Textile analysis*, Glasgow: Charles Griffin.
- Wynne A., (1997), *The motivate series – textiles*, London: Macmillan Texts for Industrial Vocational & Technical Education.

| Course Code | Title of Paper | Lectures/Week/ Division | Marks | Credits |
|-------------|----------------------------|----------------------------|-------|---------|
| USHSIII603 | World Historic Costumes | 3 | 100 | 2 |

Objectives

1. To acquaint the students with the rich heritage of costumes of the world.
2. To acquaint the students with the costumes of different centuries.

| Course content | | Period |
|----------------|---|--------|
| Unit I | Costumes of The ancient world : Egypt, Assyria, Etruscans, Rome Middle ages 11 th Century to 15 th Century | 15 |
| Unit II | Costumes of 16 th – 20 th Century | 15 |
| Unit III | Costumes of Europe from Byzantium to the 1800's Traditional costumes of the 1800's 19 th Century antique civilizations | 15 |

References

- Boucher F. (1987) *2000 years of fashion: The history of costume and personal Adornment*, New York: Harry and Abrams Inc. publishers.
- Dar, S. N. (1969) *Costumes of India and Pakistan*, D. B. Taraporewala Sons & Co, Bombay
- Doreen Y. (1992) *Fashion in the western world, 1500-1900*, B T Batsford Ltd, London.
- Fas, (1997) *Fashion Design 1850-1895*, The Pepin Press, Amsterdam.
- Harris, J (1993) *5000 years of Textiles*, British Museum, London.
- Hart, A (1998) *Historical Fashion in Detail- The 17th and 18th Centuries*, V & A Publications, London.
- Hill M H. (1987) *The Evolution of Fashion 1066 to 1930*, B T Batsford Ltd, London.
- LehnertGertoud, 2000, *A history of Fashion in the 20th Century*, KonemannVerlagsellschaftMbh, Cologne.
- Peacock J. (1993) *20th Century Fashion - The Complete Source Book*, Thames and Hudson Ltd., London.
- Peacock J. (1997) *Fashion Source book- The 1930's*, Thames and Hudson Ltd., London.
- Peacock J. (1997) *Fashion Source book- The 1950's*, Thames and Hudson Ltd., London.
- Peacock J. (1997) *Fashion Source book- The 1970's*, Thames and Hudson Ltd., London.
- Peacock J. (1998) *Fashion Source book- The 1960's*, Thames and Hudson Ltd., London.
- Racinet, A (1998) *The Historical encyclopedia of costumes*, Studio editions, London.Illustrat.
- Racinet, A (2000) *The history of European Costume: Period, Styles and Accessories*, London: Collins and Brown Ltd.
- Rocinet A (2006) *The Complete Costume History*, Tashen, Koln.
- Rothstein, N (ed) (1984) *Four Hundred years of Fashion*, V & A Publications, London.
- Seetling C, (2000) *Fashion The Century of the Designer 1900-1999*, KonemannVerlagsellschaftMbh, Cologne.
- Turner, W. R. (1989) *Folk and Festival Costumes of the World*, B T Batsford Ltd., London.

| Course Code | Title | Lectures/week | Marks | Credits |
|-------------|------------------------------|---------------|-------|---------|
| USHSIII604 | Fashion Grooming and Styling | 3 | 100 | 2 |

Objectives

1. To introduce to different styles
2. To help students acquire knowledge and understanding of the fashion grooming and styling
3. To help students learn about material sourcing ,presenting themselves for various occasion.

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | <ul style="list-style-type: none"> • Introduction to different styles. (Chic, exotic, classic, glamour's, sexy, sophisticated, tomboy, Goth etc.) • Areas of study include fashion appreciation – historical and contemporary, art style to understand fashion as a social phenomenon. • Presentation techniques, • Material sourcing. | 15 |
| Unit II | <p>Elements Of Fashion Styling -</p> <ul style="list-style-type: none"> • Skirts, • Blouses, • Dresses, • Trousers, • Men's Shirts And Trousers. <p>Accessories</p> <p>Trimming and technique</p> | 15 |
| Unit III | <p>Styling and Grooming For Different Occasion-</p> <p>Formal Wear, Party Wear –Indian and Western Wear, Casual wear , Beach Wear etc. for Men's and Women's</p> | 15 |

References

- Clothing Technology Hannelore Eberle Hermann Hermeling Marianne Horaberger Dieter Menzer Warner Ribng
- Agnès Rocamora, Fashioning the City: Paris, Fashion and the Media 0th Edition, I B Tauris, London, 2009.
- Christopher Breward, Fashion (Oxford History of Art) 1st Edition, Oxford University Press, USA, 2003.
- Clinton Kelly, Stacy London, Dress You're Best: The Complete Guide to Finding the Style That's Right for Your Body, Three River Press, 2005.
- Kendall Farr: The Pocket Stylist, Publisher : Penguin Group , U.S.A Inc. ,2004
- Alison Freer: How To Get Dressed, Publisher: Ten Speed Press Berkeley, 2015
- Style Yourself, By Jane Aldrich, Publisher: Weldon Owen, 2011
- Alan Flusser: Dressing The Man: Mastering The Art Of Permanent Fashion, Publisher: Harper Collins, 2002
- The Makeup Of A Confident Woman By Trish McEvoy, Publisher: Harper Wave , 2017

| Course Code | Title | Lectures/week/ Division | Marks | Credits |
|-------------|---|----------------------------|-------|---------|
| USHSIII605 | Textile & Apparel Merchandising & Entrepreneurship | 3 | 100 | 2 |

Objectives

1. To help students acquire knowledge and understanding of the organization sector and merchandising.
2. To help students understand entrepreneurs skills.

| Course Content | | Periods |
|----------------|--|---------|
| Unit I | Merchandising: definitions, structure of merchandising functions, roles and responsibilities, skills and merchandising as a career Planning and Control Quality Assurance E-Merchandising. | 15 |
| Unit II | Organization of the textile industry: Public and private sectors, handlooms, cooperatives, multinational companies. Supply Chain Management | 15 |
| Unit III | Entrepreneurship: skills, advantages, disadvantages. | 15 |

References:

- Donnellon J. (1999) *Merchandizing Buying and Management*, New York: Fairfield Publications.
- Gandhi, R.S. Mehta, Talele, A.B. (1992) *De-centralized sector of the Indian textile industry*. NICTAS Publication
- Kunz G. (2005) *Merchandizing: Theory Principles & Practice*. New York: Fairfield Publications & Practice.
- Sengupta, S. (1990) *Brand positioning strategies for competitive advantage*. Tata McGraw
- Entrepreneurship By Alan L. Carsrud, Malin E. Brännback, MalinBrännback. 2007
- Disciplined Entrepreneurship: 24 Steps to a Successful Startup By Bill Aulet, 2013
- Entrepreneurship: Concepts, Theory and Perspective by Álvaro Cuervo, Domingo Ribeiro, Salvador, 2007
- Entrepreneurship: The Engine of Growth by Maria Minniti, Andrew Zacharakis, Stephen Spinelli, Mark P. Rice, Timothy G. Habbershon. 2006
- Innovation and Entrepreneurship By Peter Drucke, 2011

| Course Code | Title | Lectures/week/Division | Marks | Credits |
|-------------|---|------------------------|-------|---------|
| USHSIIP601 | Knitted and Nonwoven Fabric Structure & Construction | 4 | 50 | 2 |

Objectives

1. To source and identify different knitted samples for analysis and testing.
2. To construct fabrics through techniques such as knitting, crochet, macramé and tufting.

| Course Content | | Periods |
|----------------|--|---------|
| Unit I | Sourcing and identification Of Different Knitted Samples (Minimum 5 Under Each Category) | 15 |
| Unit II | Constructing Fabrics Using: <ul style="list-style-type: none"> • Knitting (5 Samples - Manual and or Machine) • Crochet (5 Samples) | 15 |
| Unit III | Constructing Fabrics Using: <ul style="list-style-type: none"> • Tufting (Cut and Uncut Combined - 1 sample of 10x10cm) • Macramé (Various Knots) | 15 |
| Unit IV | Sourcing and Identification Of Different Non- Woven Samples and Other Construction methods | 15 |

*Journal / Portfolio

References

- Ajgaonkar, D.B. (1998) *Knitting technology*, Mumbai: Mumbai Universal publishing corporation
- Spencer, D. (1989). *Knitting Technology*. Cambridge: Woodhead.
- Grosicki, Z. J. (1980). *Watson's textile design and color*. London: Newness Butterworths.
- Hollen, Norma. (1988). *Textiles*. (6th Ed) New York: Macmillan publishing company.
- Nisbet, H. (1978). *Grammar of textile design*. Bombay: Taraporewala Sons.

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|-----------------------------------|---------------------|-------|---------|
| USHSIHP602 | Textile Testing & Laundry Science | 4 | 50 | 2 |

Objectives

1. To introduce students to different methods of testing quality assurance followed at various stages from fibre to garment.
2. To make students familiar to laundry procedures

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | Textile testing of fibres and yarns Quantitative and Qualitative Types and size/number | 15 |
| Unit II | Testing of fabrics <ul style="list-style-type: none"> • Length, width, fabric count, weight and thickness • Air and water permeability • Shrinkage • Wrinkle resistance and crease recovery • Abrasion resistance and pilling resistance • Fabric stiffness and drapability • Flammability • Tensile strength | 15 |
| Unit III | Testing of garments <ul style="list-style-type: none"> • Colorfastness check (Rub test) • Symmetry check • Size fitting test • Adhesive check (logos, printings, markings fastness) • Fabric weight test (for knitted garments) • Fasteners fatigue and zip quality test • Waterproof test • Seam slippage test (for woven garments) • Care labeling • Burn test (for 100% cotton garment) • Seam strength • Puckering | 15 |
| Unit IV | Laundry Science <ul style="list-style-type: none"> • Laundry equipments and their use. • Soaps and supplies – Soaps and detergents – Stiffening Agents – Blueing Agents, Bleaching and other Laundry reagents, grease absorbants and solvents, Dry cleaning of clothes (principle & use) • Stains – Classification stains, methods of removing different types of stains; Storage of clothes. Unit - II • Fabric finishes a) Physical – Singing, napping, sizing, tentering and calendring. b) Chemical – Bleaching, Mercerizing. c) Special purpose finishes – Wrinkle resistant, Water resistant & repellant, flame retardent. | 15 |

*Journal / Portfolio

References

- Clarke, W. (1977). *Introduction to textile printing*. London: Newnes Butterworth.
- Giles, C .H. and others. (1974). *Laboratory course in dyeing*.(3rdEd.). England: Society of Dyers and Colourist.
- Buchler,A. and Ederbard, F.(1977). *Clamp resist dyeing of fabrics*. Ahmedabad: Calico Museum of Textile.
- Shenai, V. A. (1985). *Technology of dyeing: Technology of textile processing*. Vol.VI.,Mumbai: Sevak Publication.
- Kulkarni,S.V.(1986). *Textile dyeing operations*. New Jersey: Noyes Publication.
- David G, Snclair, Roy, S. (1989) *Giles laboratory course in dyeing* (4th Ed.) London: Society of Dyers and Colourist.
- D'Souza, N. (1998). *Fabric care*. India: New Age International.
- Shenai, V. A. (1985). *Technology of printing: technology of textile processing*. Vol. IV., Mumbai:Sevak Publication.
- Rouette, H. K. (2001). *Encyclopedia of textile finishes*. Berlin: Springer Verlag.
- DeulkarDurga (1988) *Household Textiles and Laundry work*, AtmaRam and sons. Kashmiri Gate Delhi
- Gupta Sushma (2005) *Text Book of clothing Textiles and Laundry*, Kalyani Publishers New Delhi.
- Corbman Bp 1985 *Textiles Fibre to fabric* MC Graw Hill, New york. 4. Joseph M.L. (1976) *Essentials of Textiles* holtRepeniart of Winston, New York.

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|--|---------------------|-------|---------|
| USHSIIP603 | Textile Designing & Fashion Illustration | 3 | 50 | 2 |

Objectives

1. To develop skills in manual techniques and computer for basic designing of weaves, prints and illustration

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | Illustration <ul style="list-style-type: none"> • Sketching of Croqui – mechanical, fleshed out (3 poses). | 11 |
| Unit II | <ul style="list-style-type: none"> • Rendering (5 fabrics) • Mood board and illustration of any one garment | 11 |
| Unit III | Textile Designing <ul style="list-style-type: none"> • Repeats – various repeats (block, brick, ogee, diamond, drop, mirror and their variations) • Designing of 5 – 6 layouts based on various repeats and themes, colour way and colour separation of one layout | 11 |
| Unit IV | <ul style="list-style-type: none"> • Demonstration in computer aided designing for weave structures and prints with different repeats and colour combination • Journal/ Portfolio | 12 |

*Journal / Portfolio

References:

- McKelvey, K. (1996) *Fashion source book*. Oxford: Blackwell Science
- McKelvey, K. (1996) *Illustrating fashion*. Oxford: Blackwell Science.
- Neady, F. (1958) *Fashion drawing*. New York: Rotman.
- Tate, S.L. (1987). *The complete book of fashion illustration*. New York: Harper & Row.
- Toledo, R. (1996). *Style dictionary*. New York: Abbeville.
- Turnpenny, J.M. (1983). *Fashion design and illustration II- knitwear and jersey*. London: Century Hutchison
- Turnpenny, J.M. (1986). *Fashion design and illustration I- basic guidelines*. London: Century Hutchison

| Course Code | Title | Lectures/week/Batch | Marks | Credits |
|-------------|--|---------------------|-------|---------|
| USHSIIP604 | Pattern Making & Garment Construction – Men's wear | 4 | 50 | 2 |

Objectives

1. To teach students how to read elaborate styles and patterns.
2. To equip students with the techniques of advanced pattern designing through flat pattern construction.
3. To acquaint students with the techniques and skills of garment construction through flat pattern.
4. To make students competent to stitch garments with elaborate patterns.

| Course content | | Periods |
|----------------|--|---------|
| Unit I | Basic Blocks: Adults bodice block and lower block | 15 |
| Unit II | Fundamentals A. Plackets: Continuous Kurta placket. B. Pockets – Velt, Bound, front pant pocket, side pant pocket | 15 |
| Unit III | Upper wear: • Shirt | 15 |
| Unit IV | Lower wear: • Trousers. | 15 |

*Journal / Portfolio with technical drawings

References:

- Pattern Making for Fashion design by Armstrong, Vikas Publishing House Pvt.Ltd. Delhi.
 Armstrong, H (2014) Ed. 5th, *Pattern Making for Fashion Design*. Delhi India: Dorling Kindersley Private Limited,
 Doongaji, S &Deshpande, R. (1968).*Basic Processes and Clothing Construction*. India: New Raj Book Depot.
 McCall's. (1964).*Sewing in Colour*. London: The Hamlyn Publishing Group Ltd.
 Reader's Digest, (1993). *Step by Step Guide: Sewing and Knitting*, Auckland: Reader's Digest.

| Course Code | Title of Paper | Lectures/week /Batch | Marks | Credits |
|-------------|--|----------------------|-------|---------|
| USHSIIP605 | Part A : Project work- Entrepreneurial Skill Development in Textile & Fashion | 4 | 50 | 2 |
| | Part B : Project work II - Sustainable Social Entrepreneurship | 4 | 50 | |

Part A : Project work- Entrepreneurial Skill Development in Textile & Fashion

Objectives

1. To gain knowledge of contemporary products based on traditional crafts.
2. To create awareness of the process of Consumer and market Study.
3. To study planning of an entrepreneurial venture and executing the plan
4. To understand the requirements of the process of running a business with respect to marketing and optimizing all resources.
5. To gather inputs into finance, accounting procedures and profit management.
6. To understand the ethical and legal aspects of an entrepreneurial venture

| Course Content | | Periods |
|----------------|--|---------|
| Unit I | Product /service conceptualization <ul style="list-style-type: none"> • Ideation with help of market research (Preparation of Tool, sampling for Consumer study, conducting survey, analysis of survey results, report writing etc.) • Project selection and evaluation • Project Proposal Preparation including Budgeting | 15 |
| Unit II | Sourcing of various resources including funds | 15 |
| Unit III | Executing the proposed plan <ul style="list-style-type: none"> • Product /Service development • Logistics and protocol development • Packaging and labeling | 15 |
| Unit IV | Marketing the developed product/service <ul style="list-style-type: none"> • Applications of marketing concepts Final Evaluation for Profitability, Branding etc. | 15 |

References

- Barrow Colin, Brown Robert, Clarke Liz, (2006). The Successful Entrepreneurs guide book. London: Kogan and Page.
- Business to Business Market Research: Understanding and Measuring Business Markets by Ruth MCNEIL, 2005
- Market Research in Practice: An Introduction to Gaining Greater Market Insight 3rd Edition by Paul Hague, Julia Cupman, Matthew Harrison, Oliver Truman, 2016

- Strategic Market Research: A Guide to Conducting Research that Drives Businesses, by Anne E. Beall,**2010**
- Wansink (2003). Using laddering to understand and leverage a brands equity. Qualitative Market Research: An International Journal.
- How Customers Think, summarized by arrangement with Harvard Business School Press, from How Customers think: Essential Insights into the Mind of the Market by Gerald Zaltman. Copyright 2003 by Gerald Zaltma

Part B : Project work II - Sustainable Social Entrepreneurship

Objectives

1. To create awareness of the different techniques in production and marketing.
2. To gain knowledge of sustainable community work through production and marketing of textile craft products.
3. To make students aware of sustainable products for the community and to inculcate social entrepreneurial attitude.

| Course Content | | Periods |
|----------------|---|---------|
| Unit I | Reviewing on Sustainable Textiles | 15 |
| Unit II | Experimenting with different types and techniques in production of sustainable products (3 products) | 15 |
| Unit III | Transfer of the above to community and evaluate marketability. Train beneficiaries with entrepreneurial skills. | 15 |
| Unit IV | Collecting feedback and incorporating for further betterment for the community where the project was undertaken | 15 |

References

- Beatley, Timothy, and Kristy Manning. *The Ecology of Place: Planning for Environment, Economy, and Community*. Washington, DC: Island Press, 1997, chapter 1, and 5. ISBN: 1559634782.
- Waldinger, Roger, Howard Aldrich, and Robin Ward. "Opportunities, Group Characteristics, and Strategies." In *Ethnic Entrepreneurs: Immigrant Business in Industrial Societies*. Newbury Park, CA: Sage Publications, 1990, pp. 13-49. ISBN: 0803937113.
- Kinsley, Michael. "Sustainable Development: Prosperity without Growth." In *Economic Renewal Guide*. Old Snowmass, CO: Rocky Mountain Institute, chapter 1. ISBN: 1881071065.
- Iakely, E., and T. Bradshaw. "Business Development." In *Planning Local Economic Development: Theory and Practice*. Thousand Oaks, CA: Sage Publications, 1994, Chapter 8, pp. 217-235. ISBN: 0803952104.

Examination Scheme for BSc Home Science Semesters V and VI:

Part A: Theory Papers

All theory papers of 100 marks are to be evaluated in two parts.

INTERNALS: 25 marks. This comprises 20 marks for a 30-minute unit test, of which 10 marks are for objective-type of questions and 10 marks for questions requiring longer (but not essay) answers. The objective 10 marks can include the following types of questions:

- Agree/Disagree and give a one-or-two sentence reason.
- Fill in the blanks
- Answer in one or two sentences.
- Name the following.
- Define the following.

Please note that the objective 10 marks **cannot** have the following types of questions:

- MCQs.
- State whether True or False (without giving a reason).
- Match the following.

The remaining 5 marks indicate the extent to which the student was a responsible learner.

SEMESTER-END EXAMINATION: 75 marks. The semester-end question paper is for 2 ½ hours. The semester-end examination question paper has to be set with 100% choice within each set of questions. For all three unit syllabi, the question paper must have four sets of questions; each of the four questions is compulsory, with options within each question:

- Question 1, carrying 20 marks, has a set of sub-questions from Unit I.
- Question 2, carrying 20 marks, has a set of sub-questions from Unit II.
- Question 3, carrying 20 marks, has a set of sub-questions from Unit III.
- For Questions 1, 2 and 3, no 20-mark question is permitted. In other words, this question cannot have a choice between two 20-mark questions. Possible sub-questions include the following formats: Answer any 2 sub-questions out of 4, or any 4 out of 8, or any 5 out of 10.
- Question 4, carrying 15 marks, has a set of sub-questions from Units I, II, and III. No 15-mark question is permitted. In other words, this question cannot have a choice between two 15-mark questions. Possible sub-questions include the following formats: Answer any 2 sub-questions out of 4, or any 3 out of 6.

Part B For Courses with Practical : There will not be any Internal Examination or marking for practicals

External Semester End Examination for Practical :

| Sr. No. | Particulars for External Practical Examination Semester End Practical Examination | | Total Marks | Duration of Semester End Practical Examination |
|---------|---|----------|-------------|--|
| 1 | Laboratory Work | 40 marks | 50 | 3 ½ hours |
| 2 | Journal | 5 Marks | | |
| 3 | Viva | 5 Marks | | |