

**Syllabus Prescribed for Second Year PG Programme  
MSc (Home Science) Textile and Clothing  
Semester III**

<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 301</b>	<b>Research Methodology and Statistical Applications</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Gain knowledge about research and its types
2. Know the fundamental principles and techniques of methodology concerning research
3. Apply statistical procedure to analyze data and draw inferences .

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	<b>Introduction to Research</b> <ul style="list-style-type: none"> <li>• Research – meaning and definition,</li> <li>• Importance of research in the developmental context</li> <li>• Research process</li> </ul>	12
Unit II	<b>Research Design and Sampling</b> <ul style="list-style-type: none"> <li>• Meaning, Basic components of research design and types of research design</li> <li>• Concept of Population and Sample, Characteristics of good sample</li> <li>• Types and Methods of drawing Sample Probability sampling and Non probability sampling</li> </ul>	12
Unit III	<b>Data Collection</b> <ul style="list-style-type: none"> <li>• Concept of data, Types of Data – Qualitative and Quantitative data, Primary and Secondary data</li> <li>• Levels of data measurements and characteristics of good measurement</li> <li>• Tools of data collection and their uses · Questionnaire · Schedule · Rating scale · Attitude scale · Interview – structured and unstructured · Observation – participant and non participant · Attitude scale ·</li> </ul>	12
Unit IV	<b>Descriptive and Inferential Analysis of Data</b> <ul style="list-style-type: none"> <li>• Measures of central tendency-mean, median, mode-arithmetic mean and its uses</li> <li>• Measures of dispersion /variability- range, variance, standard deviation, standard error, coefficient of variation, Kurtosis, skewness</li> <li>• Large and Small Sample tests and interpretation Coefficient of correlation, · t tests · Z test · F test · ANOVA</li> <li>• Application of non parametric tests · Chi square test · Spearman’s Rank correlation</li> </ul>	12
Unit V	<b>Report Writing</b>	12

	<ul style="list-style-type: none"> <li>• Basic components of a research report- Preliminaries, Introduction , Review of Related Literature, Methodology, Results, Discussion, Conclusion, Summary, Bibliography and Appendices</li> </ul>	
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### **Course Material/Learning Resources**

#### **References:**

1. Devadas.R., 2000.A Handbook on methodology of Research, Sri RamakrishnaVidyalaya, Coimbatore
2. Gupta.S.P., 2002 .Statistical Methods, Sultan Chand & Sons, New Delhi
3. Srivastava.A.B.L and Sharma. K.K., 2003 .Elementary Statistics in Psychology andEducation, Sterling Publishers Pvt.ltd
4. Kothari.G.R., 2004 Research Methodology, Methods and Techniques, Wiley EasternLimited, New Delhi
5. Gosh.B.N., 2006. Scientific Methods and Social Research Sterling Publishers Pvt.ltd.,New Delhi.
6. Kulbir Singh. S., 2006 Methodology of Research in Education Sterling PublishersPvt. Ltd., New Delhi.
7. Coolican, H. (2014). Research methods and statistics in psychology (6th ed.). Psychology Press.
8. Kothari, C.R. (2019) Research Methodology: Methods and Techniques. 4th Edition, New Age International Publishers, New Delhi.

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 302</b>	<b>Textile Testing and Quality Control</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Understand the techniques and principles of testing of textiles and garments
2. Understand different methods of testing quality assurance followed at various stages from fiber to garment
3. Appraise and defend quality of products

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	Introduction to Textile Testing <ul style="list-style-type: none"> <li>• Meaning, definition, need and importance.</li> <li>• Textile testing of fibres and yarns, Quantitative and Qualitative Types and size/number -</li> <li>• Fibres – length, fineness</li> <li>• Yarn – Strength, evenness, openness, load elongation and crimp</li> </ul>	12
Unit II	Fabric dimensions and properties <ul style="list-style-type: none"> <li>• (woven, knitted and non – woven)</li> <li>• Testing of fabrics : 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</li> </ul>	12
Unit III	Testing of garments <ul style="list-style-type: none"> <li>• Colorfastness check (Rub test) , Symmetry check , Size fitting test , Adhesive check (logos, printings, markings fastness)</li> <li>• Fabric weight test (for knitted garments)</li> <li>• Fasteners fatigue and zip quality test , Waterproof test , Seam slippage test (for woven garments)</li> <li>• Care labeling , Burn test (for 100% cotton garment)</li> <li>• Seam strength , Puckering</li> </ul>	12
Unit IV	Type of fabric defects ( woven & knits) <ul style="list-style-type: none"> <li>• Grading of fabric and its usage</li> <li>• Quality standards as applicable to various types of textiles (Garments, yardage, knits, woven, carpet, processing and dyeing)</li> </ul>	12

	<ul style="list-style-type: none"> <li>Quality audits:ISO 9001 structure, Quality audits, ISO registration, Statistical sampling and application of AQL</li> </ul>	
Unit V	<p>Standardisation and quality control of textile products</p> <ul style="list-style-type: none"> <li>Concept, need and importance</li> <li>National and International organizations for standardization</li> <li>Concept of Statistical Quality Control</li> <li>Sampling <ul style="list-style-type: none"> <li>Test methods used</li> <li>Tolerance limits, CV%</li> </ul> </li> <li>Advances in textile testing and quality Assurance</li> </ul>	12

### Course Material/Learning Resources

#### References:

1. Back C. Robert (1986), Psychological factors at work, Recognition and Control, ILO, Geneva, Occupational Safety and Health Series No.56.
2. Morgan C.T., King R.A., Robinson N.M. (1979), Introduction to Psychology, Tata McGraw Hill Publishing Co., New Delhi.
3. Kolff D. (1984), Experimental Learning – Experiences as the source of learning and development.
4. Chauhan S.S. (1984), Advanced Educational Psychology, Vikas, New Delhi.
5. Gagne R.M. (1978), The conditions of learning, Holt and Rinehart, New York.
6. Bigge M.L. (1982), Learning Theories for Teachers, Harper & Row, New York
7. Shenai V.A. (1984) Technology of Textile Processing, Vol. IX, Sevak Publication
8. Booth J.E. Principles of Textile Testing : Newnes Butter Worth, London
9. Clarke, W. (1977). Introduction to textile printing. London: Newnes Butterworth
10. Marsh J.T. (1979) An Introduction to Textile Finishing, B.L. Publications.
11. Buchler, A. and Ederbald, F. (1977). Clamp resist dyeing of fabrics. Ahmedabad: Calico Museum of Textile.
12. Kulkarni, S.V. (1986). Textile dyeing operations. New Jersey: Noyes Publication
13. Rouette, H. K. (2001). Encyclopedia of textile finishes
14. Gupta Sushma (2005) Text Book of clothing Textiles and Laundry, Kalyani Publishers New Delhi

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 303 A</b>	<b>Pattern Making</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Develop skills in Pattern making and garment construction
2. Understand garment components and interrelationship

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	Dress design Standards for judging costume - Aesthetic requirements for dress, suitability to the individuals, factors in personality - planning a wardrobe, requirements for health and modesty . Planning of dressing, selection of material, texture, pattern, and colour. Suggestion for person who have unusual problems in dress.suggestion forpersons with figure irregularities	12
Unit II	Fashion accessories Shoes, headgear, hand bags, neck wears, other accessories.  Fitting- factors affecting good fit, common problems encountered and remedies for fitting defects ( lower and upper garments)	12
Unit III	Study of interrelationship of thread, needle, stitch length and fabric  Fashion reading and garment including sketch, pattern, garment name size range pattern pieces , fabric widths, specific garment details ,accessories used fabric recommendation and garment costing.	12
Unit IV	Pattern alteration, lengthening and shortening patterns, making bust, shoulder, crotch length alteration, increasing and decreasing waistline and hipline, neckline and sleeve alteration.  Basic Stitches- Hand Stitches-tacking stitches.  Working & making up stitches-Quick slip stitch, Overcast stitch, .Lockstitch, finishing touches interfacings and linings.	12
Unit V	Study of fasteners, pocket, plackets, hem finish, trimming and decoration,	12

	applying collars, sleeves, types of sleeves. Costing : Method of costing , Element cost for fabric , Calculating cost for a fabric Methods of project evaluation	
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**Course Material/Learning Resources**

**References:**

1. Pamela C. Stinger, pattern drafting for dress making.
2. Sheldon Maratha Gene – Design through drafting USA. BurgesPublishing Co.
3. Pepin Harriet – Modern Pattern Design, New York.
4. Crawford C.A. – The Art of Fashion Draping, Fair Child Publication, New York.

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>303 B</b>	<b>Dyeing and Printing</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Gain knowledge about preparation of fabric for dyeing & Printing
2. Understand the theory of dyeing in relation to various classes of dyes
3. Develop technical competency in printing with different dyes on different fabrics

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	Preparation of fabric for dyeing and printing <ul style="list-style-type: none"> <li>• Scouring, Bleaching, Designing.</li> <li>• Reagents used and their application.</li> <li>• Specific preparatory steps for cotton wool, silk and manmade fibers.</li> </ul>	12
Unit II	Equipments used at cottage and industrial level for yarn, fabric and piece goods	12
Unit III	Dye - Classification, definition components <ul style="list-style-type: none"> <li>• Colour and Chemical constitution of dyes.</li> <li>• Dyeing defects and remedies.</li> <li>• Dyeing auxiliaries and their uses</li> </ul>	12
Unit IV	Printing - Introduction to printing. <ul style="list-style-type: none"> <li>• Printing paste, thickening agents and auxiliaries for printing, and their suitability to different fabrics</li> <li>• Preparation of printing paste for different dyes and different fibers.</li> </ul>	12
Unit V	Styles of printing - <ul style="list-style-type: none"> <li>• Direct dyed, resist or reserved style, discharged style and raised style.</li> <li>• Finishing and after treatments of printed goods.</li> </ul>	12

**Course Material/Learning Resources**

**References:**

1. V.A. Shenai, Chemistry of dyes and principles of dyeing, 1987, Seval Prakashan Mumbai.
2. R.S. Prayag, Technology of textile printing - Noyes data Corp.
3. M.L. Gulrajani & Deepti Gupta - 1990.
4. Natural dyes and their application to textiles.
5. ASTM and ISI Stds.
6. K. Venkatrama, 1970, Chemistry of Synthetic dyes Part I and Part II.
7. V.A. Shenai 1999 - AZo dyes, facts and figures Sevak Pub. Mumbai

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 303 C</b>	<b>Knitting Technology</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Know about Indian knitting Industry.
2. Understand fundamentals of knitting, types of knitting process and various knitting structures.
3. Appraise the knitted garments

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	Introduction to knitting <ul style="list-style-type: none"> <li>• Definition, basic structural terms, and principles of knitting technology.</li> <li>• Difference between Knits and woven.</li> <li>• Development of knitting from hand knitting to machine knitting.</li> </ul>	12
Unit II	Basic mechanical principles of knitting technology <ul style="list-style-type: none"> <li>• Elements of knitted loop structure</li> <li>• Four primary base structures (Plain, Rib, interlock, Purl)</li> </ul>	12
Unit III	Warp and Weft Knitting <ul style="list-style-type: none"> <li>• Terms and definitions.</li> <li>• Composition of weft and Warp Knitting</li> <li>• Classification of warp Knitting machines and Weft Knitting machines</li> <li>• Weft Knitting - Basic structures, designing of Weft Knit structures, needle and yarn selection for weft knitting</li> <li>• Warp Knitting-Basic warp knit structures and their representation, patterning mechanism for warp knit designs,</li> </ul>	12
Unit IV	Tricot and Raschel Knits - Principles, characteristics, properties, Machines and production method	12
Unit V	Flat Knitting and circular knitting <ul style="list-style-type: none"> <li>• Machine parts, elements, characteristics</li> <li>• Indian Knitting industry - Past and present.</li> </ul>	12

**Course Material/Learning Resources**

**References:**

1. David J. Spencer- Knitting Technology,
2. Prof. D.B. Algaonkar - Knitting Technology, University Publishing Corporation, Bombay.
3. Dr. Samuel Roz - Flat Knitting Technology, Germany,
4. Terry Brockenbary - Knitted clothing Technology - Blackwell Science



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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 304 A</b>	<b>Historic Costumes</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Get acquainted with the costumes of different centuries.
2. Develop sensitivity and understanding towards historic silhouettes and designs.
3. Value the rich heritage of costumes of the world.

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	Clothing - origins and functions <ul style="list-style-type: none"> <li>• Costume in ancient civilization</li> <li>• Emphasize on fabric, garment features, use of colour, decoration and accessories : Indian and Egyptian.</li> </ul>	12
Unit II	Ancient costumes Greek Roman	12
Unit III	Medieval costume of court, upper class, and peasant during 12 <sup>th</sup> to 17 <sup>th</sup> Century – French	12
Unit IV	Costumes of China and Japan	12
Unit V	Growth and development of Indian Costume from ancient to 20 <sup>th</sup> century	12

**Course Material/Learning Resources**

**References:**

1. J Underson Black, Muidge Garland, A History of Fashion, Orbits Publishing limited, London.
2. Boucher Francois, A History of Costume in the West, Thames andHudson.
3. R. Turner Wilcox, The Dictionary of costume, B.T. Bats Ford Ltd.

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 304 B</b>	<b>Social and Psychological Aspects of Clothing</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Understand the socio psychological aspects of clothing on the individual in social situations.
2. Get knowledge regarding the factors that affect making clothes for individual.
3. Appraise the role of clothing in personality development and self concept

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	<p>Origins and theories of clothing</p> <p>Variations in costumes due to</p> <ul style="list-style-type: none"> <li>• material aspects and climate-</li> <li>• Religious influence on costume</li> <li>• Influence of events of the world</li> </ul> <p>Social impact of clothes- fashion, fads, role of uniforms, national costumes, occupational clothing, etc</p>	12
Unit II	<p>Essentials of clothing</p> <ul style="list-style-type: none"> <li>• Importance of clothing</li> <li>• Psychological aspects of clothing</li> </ul> <p>Role of clothing in personality development and self concept</p>	12
Unit III	<p>Individual clothing</p> <ul style="list-style-type: none"> <li>• Factors influencing choice of clothes- conformity, mobility, class distinction, symbolism, customs and values</li> <li>• Psychological impact of colour</li> <li>• Figure proportion and illusion</li> </ul>	12

Unit IV	Clothing budget and Wardrobe planning <ul style="list-style-type: none"> <li>• Clothing and family budget</li> <li>• Individual clothing budget and wardrobe planning</li> </ul>	12
Unit V	Socialisation and development of the self <ul style="list-style-type: none"> <li>• Social norms</li> <li>• Attitudes and value formation</li> <li>• Individuality and conformity</li> <li>• Person and group identification</li> </ul>	12

### Course Material/Learning Resources

#### References:

1. Back C. Robert (1986), Psychological factors at work, Recognition and Control, ILO, Geneva, Occupational Safety and Health Series No.56.
2. Back C. Rober (1986), Apply Psychology understanding people, Prentice Hall Englewoods Cliffs, New Jersey.
3. Morgan C.T., King R.A., Robinson N.M. (1979), Introduction to Psychology, Tata McGraw Hill Publishing Co., New Delhi.
4. Kolf D. (1984), Experimental Learning – Experiences as the source of learning and development.
5. Chauhan S.S. (1984), Advanced Educational Psychology, Vikas, New Delhi.
6. Gagne R.M. (1978), The conditions of learning, Molt and Rinehart, New York.
7. Bigge M.L. (1982), Learning Theories for Teachers, Harper & Row, New York.

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 304 C</b>	<b>Indian Textile Industry</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Get acquainted with the multifaceted profile of the textile industry of India
2. Understand the economic and policy regulations within which the industry is operating.
3. Know about the sectors of Textile Industry

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	<ul style="list-style-type: none"> <li>• History of Indian textile Industry</li> <li>• Importance of textile and clothing industry in the Indian economy in terms of domestic consumption, employment and per capita income, gross national product and international trade.</li> </ul>	12
Unit II	<ul style="list-style-type: none"> <li>• National textile policy -change in focus over the year in terms of objectives function, ability, regulatory mechanisms</li> <li>• Foreign trade policy - The mechanism of MFA - History and current status.</li> <li>• Export Import policy</li> </ul>	12
Unit III	Meaning and Role of - TUFS, SITP, NTC, EPCG, ATC, etc	12
Unit IV	<ul style="list-style-type: none"> <li>• Sectors in Textile Industry</li> <li>• The textile &amp; clothing industry in relation to production and consumption pattern, locale, employment potential</li> </ul>	12
Unit V	Research and development- problems and prospects of Textile Industry	12

**Course Material/Learning Resources**

**References:**

1. Mishra and Puri, Indian Economy-Himalaya Pub. House.
2. National textile policy 1986 - 2001
3. Economic Surveys, Govt. of India.
4. Industry published journals, news letters from SASMIRA, WVEPC.
5. Journals, - Clothes line, Business India, Business today.

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<b>TC 305</b>	<b>Research Methodology and Statistical Application</b>	<b>2/w</b>

**Course Outcomes:**

**By the end of the Lab/Practical Course, students will**

1. Logically and Critical understand of the research areas in the subject.
2. Create the various forms of data presentation.

**\* List of Practical/Laboratory Experiments/Activities etc.**

<b>1</b>	Collect and review the research paper on types of research on the topic related to your specialization
<b>2</b>	Use sampling techniques for drawing probability and non probability sample.
<b>3</b>	Prepare tools for collection of qualitative data.
<b>4</b>	Prepare tools for collection of qualitative data.
<b>5</b>	Practice statistical programs as MS Office or any other software for descriptive and inferential statistics.
<b>6</b>	Prepare Diagrammatic and graphical presentation of data – One dimensional diagrams-Two dimensional diagrams, carto graphs, frequency graphs.
<b>7</b>	Use of Plagiarism check software

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>TC 306</b>	<b>Textile Testing and Quality Control</b>	<b>4/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Apply the aspects of quality control in textiles
2. Analyse the textile products for quality assurance
3. Test the textiles for various parameters of use

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Testing of textiles using appropriate standardised procedures Fibers – Length, diameter and fineness
2	Yarn – Count, heaviness, twist, crimp, strength
3	Fabric – Thread count, thickness, stiffness, shrinkage, crease recovery, bursting strength, drape, tensile strength
4	Colour fastness tests
5	Visit to Textile Testing laboratories

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>TC 307 A</b>	<b>Pattern Making</b>	<b>4/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Be enabled to obtain fit and harmony between fabric and design of garment
2. Apply various sleeves and bodice combinations

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Development of variation in sleeves- sleeves and bodice combinations
2	Development of paper pattern and construction of garments ( using checks, stripes, unidirectional and novelty fabrics)
3	Development of ladies block of crotch line garment by drafting and draping ( shorts, bermuda, trousers)

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>307 B</b>	<b>Dyeing and Printing</b>	<b>4/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Apply the aspects different classes of dyes for dyeing
2. Develop printing skills

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Preparation of fabric for dyeing and printing.
2	Dyeing of fabric with different classes of dyes. M : L. Concentration., temperature, levelling / exhausting agents.
3	Dyeing with natural dyes.
4	Printing, discharge, resist style, direct style. Finishing of printed goods



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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>307 C</b>	<b>Knitting Technology</b>	<b>4/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Develop basic knitted samples
2. Get knowledge of the knitting units

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Making knitted samples with basic stitches
2	Learning to operate Flat Knitting machine and circular knitting machines.
3	Analysis and testing of knitted samples
4	Yarn calculation for weft and warp knits.
5	Visits to different knitting units.

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Semester IV**

<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 401</b>	<b>Advanced Apparel Construction</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Develop skills in Advanced Apparel Construction
2. Become aware of the requisites of clothing for people with special needs
3. Appraise the pre buying activities for Apparel construction

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	Fashion read, layout and lay marking for different garments with a different textured fabric and different printed fabric. Fashion reading of garment including sketch, pattern, garment name, size range , pattern pieces , fabric widths, specific garment details , accessories used, fabric recommendation and garment costing.	12
Unit II	Pre-buying Activity, Fabric types, properties and Behavior, selection of Fabric, Garment construction. Quality requirements, quality problems, Merchandiser's role after production, Delivery date extension, transport delays - Natural calamities. Importance of LC amendments Business opportunities and avenues. Interdepartmental relationship for merchandiser. Boutique handling	12
Unit III	Application of grading techniques for basic drafts. Children's basic blocks–Bodice, sleeve. Women's basic blocks – Bodice , sleeve , skirt. Men's basic blocks – Bodice , sleeve , trouser. Pattern grading Developing patterns by adaptation method with variation in garment Children's wear, Women's wear ,Men's wear	12
Unit IV	Clothing for people with special needs : <ul style="list-style-type: none"> <li>• Maternity and lactation period</li> <li>• Old age</li> <li>• Physically challenged.</li> </ul>	12
Unit V	Draping on the dress form – dart manipulation, pleats, darts, tucks and gathers. Neckline variation, armhole variation, waistline variation. The princess waist, yokes, basic cowls and variation.	12

	<p>Draping of Skirts- Flared, Skirt, gored skirt, pleated skirt, hip yoke skirt. Draping of collars- Mandarin collar, band collars, convertible collar, peterpan collar, shawl collar, Chinese collar Draping of sleeves-Basic sleeve, dolman sleeve, raglan sleeve, kimono sleeve.</p>	
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**Course Material/Learning Resources**

**References:**

1. Pamela C. Stinger, pattern drafting for dress making.
2. Sheldon Maratha Gene – Design through drafting USA. BurgesPublishing Co.
3. Pepin Harriet – Modern Pattern Design, New York.
4. Crawford C.A. – The Art of Fashion Draping, Fair Child Publication, New York.

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<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 402</b>	<b>CAD in Textile and Fashion</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Understand the role of Computer technology
2. Be aware of various softwares used in Designing and production
3. Learn scanning of already printed fabrics and the process of printing out colour separation.

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	<p>Application of computers in Textile Industry- woven and knitted fabrics, Apparel Designing and Production , Pattern Making &amp; Drafting , and textile printing industry</p> <ul style="list-style-type: none"> <li>• Terminologies used</li> <li>• Importance of computer application in clothing and textiles</li> <li>• CAD- CAM, system of textile design, colour mixing &amp; matching.</li> <li>• Design studio, design Jazquard, design desk pro</li> </ul>	12
Unit II	<p>Basic Softwares :</p> <ul style="list-style-type: none"> <li>• Corel Draw,- a vector based software</li> <li>• Adobe Photoshop- a bitmap based software</li> </ul> <p>Creating Motifs , Importing Motifs, Repeat , prints</p>	12
Unit III	<p>Garment designing -</p> <p>3D Forms - Computer technology used in garment assembly</p> <ul style="list-style-type: none"> <li>• Features and functionalities of various CAD Packages used for garment designing, pattern making and marking</li> <li>• Programmable sewing machines.</li> <li>• Pattern developing.</li> <li>• Grading and marking</li> </ul>	12
Unit IV	Use and importance of Internet and websites as source for	12

	Design Ideas. Computer Technologies and E- Commerce for textile sectors - Recent developments in Computer Technology for E Commerce in Retail Sector	
Unit V	<ul style="list-style-type: none"> <li>• Recent developments in CAD CAM</li> <li>• Future Trend Forecast of CAD in Textile Sectors</li> <li>• Understanding Video, Video Formats and playback speeds</li> <li>• Introduction to Movie Maker Understanding Audio</li> </ul>	12

### **Course Material/Learning Resources**

#### **References:**

1. Veisinet D.D. (1987) : Computer Aided drafting & design : Concept and application.
2. Fujii D. Colour with style, Graphic Sha Publishing Company Limited.
3. Winifred A. (1990) : Metric Pattern Cutting for mens wear. Including Unisex, casual clothes & computer.
4. Corklin P.G. (1990) : Pattern Grading for Women's Clothes. The Technology of Sizing, BSP Professional Books, Oxford.
5. Aldrich W. (1994) : CAD in Clothing and Textiles, Blackwell Science Ltd.
6. Alison Beazley Terry bond, Computer aided pattern design and product development, Black Wele, Amazon, 2003.
7. Harold Carr & Barbara Latham, The technology of clothing manufacture, Black Well, Berlin, 2004.

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Semester IV**

<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject</b>	<b>(Total Number of Periods)</b>
<b>TC 403</b>	<b>Entrepreneurship Development</b>	<b>60</b>

**Course Outcomes**

**After completion of the course students will**

1. Provide conceptual inputs regarding entrepreneurship development in food
2. Sensitize and motivate towards entrepreneurship development
3. Orient and impart knowledge towards identifying and implementing entrepreneurship opportunities

<b>Unit</b>	<b>Contents</b>	<b>Periods</b>
Unit I	Conceptual Framework <ul style="list-style-type: none"> <li>• Concept, need and process in entrepreneurship Development</li> <li>• Types of enterprise – merits and demerits</li> <li>• Role of enterprise in national and global economy</li> </ul>	12
Unit II	The Entrepreneur <ul style="list-style-type: none"> <li>• Entrepreneurial motivation – dynamics of motivation</li> <li>• Entrepreneurial competency – concepts</li> <li>• Developing entrepreneurial competencies–requirements and understanding the process of entrepreneurship development, self awareness, interpersonal skills, creativity, assertiveness, achievement, factors affecting entrepreneur’s role</li> </ul>	12
Unit III	Launching and Organising an Enterprise <ul style="list-style-type: none"> <li>• Environment scanning – information, sources, schemes of assistance, problems</li> <li>• Enterprise selection, enterprise, feasibility study, SWOT analysis</li> <li>• Resource mobilization – finance, technology, raw material, site and man power</li> <li>• Market assessment, costing and quality control</li> </ul>	12
Unit IV	Areas of Entrepreneurship <ul style="list-style-type: none"> <li>• Production and marketing of products</li> <li>• Consultancy areas</li> <li>• Services</li> </ul>	12
Unit V	Agencies for Development of Entrepreneurship <ul style="list-style-type: none"> <li>• Government of India’s policy towards promotion of entrepreneurship reservations and sanctions for small scale sector</li> <li>• Role of SSI, Procedures and formalities for setting up SSI</li> <li>• Role of banks and other agencies for development of entrepreneurship</li> </ul>	12

## **Course Material/Learning Resources**

### **References:**

1. Hisrich R.D. and Peters M.P. (1995) Entrepreneurship – starting, developing and managing a new enterprise. Richard D. Irwin INC, USA.
2. Meredith C.G. et al (1982) Practice of Entrepreneurship. ILO , Geneva.
3. Deshpande M.V. (1984) Entrepreneurship of small scale industries, concept, growth and management. Deep and Deep Publication D-1/24, R-Garden, New Delhi.
4. Parekh U. and Rao T.V. (1978) Personal Efficacy in Development Entrepreneurship, Learning system. New Delhi.
5. Vasant Desai (1991) Entrepreneurship and Entrepreneur Development, Vol. I, II, III, Himalaya Publishing House.
6. Maratha Chamber of Commerce, Industrial Development of Maharashtra, Latest edition.

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Semester IV**

<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>TC 404</b>	<b>Advanced Apparel Construction</b>	<b>4/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Be enabled to obtain fit and harmony between fabric and design of garment
2. Construct new styles in garments

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Designing cutting and stitching of following garments <ul style="list-style-type: none"> <li>• Party wear(Any one garment )</li> <li>• House coat / night suit</li> <li>• Skirt with jacket &amp; top</li> </ul>
2	Creating and constructing new styles in following garment by draping method. <ul style="list-style-type: none"> <li>• Skirts</li> <li>• Blouse or Top</li> <li>• Evening Dress</li> </ul>
3	Organization of exhibitions and display of the collection of garments



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Semester IV**

<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>TC 405</b>	<b>CAD in Textile and Fashion</b>	<b>4/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Use CAD for fashion designing
2. Test ideas in real time without creating real prototypes
3. Make thoughtful and innovative designs

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Computer aided designing for weave structures and prints with different repeats and colour combination
2	Formulation of various yarns and weaving them on the monitor to get different fabrics with specified end use
3	Alteration & modification of the available design and confirm it to professional standards.
4	Explore various approaches to creation & colour application. Creating colour ways, new designs and textures by using available effects like embossing, blurring, transparent & translucent.
5	Putting dart, adding seam allowances and making the layout.
6	Learning different tools required for photo realistic draping of garment.
7	Use search engines to source design ideas, designers, design trends. Hands on practice on the internet for using search engines, browsing internet for collecting information, sending emails

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Semester IV**

<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>TC 406</b>	<b>Scientific Writing</b>	<b>4/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Effectively use the library resources
2. Access OPAC and WEBOPAC
3. Retrieve information and evaluate the resources

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Use of Library - Get acquainted with the- Type of Library (Traditional, modern, digital, virtual) Services provided by Libraries Various sources (Printed and electronic) Technical work (classification, cataloguing) Information retrieval ( i.e. OPAC, WEBOPAC in library software, Library Portal, e-books etc.)
2	Use of Reference manager tool
3	Review, understand and critically evaluate Thesis Research project Abstract

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MSc (Home Science) Textile and Clothing  
Semester IV**

<b>Code of the Course/Subject</b>	<b>Title of the Course/Subject (Laboratory/Practical/practicu m/hands-on/Activity)</b>	<b>(No. of Periods/Week)</b>
<b>TC 407</b>	<b>Pattern Making and Styling</b>	<b>2/w</b>

**Course Outcomes**

**By the end of the Lab/Practical Course, students will**

1. Be introduced to different styles
2. Acquire knowledge and understanding of the fashion grooming and styling
3. Learn about material sourcing, presenting themselves for various occasion

**\* List of Practical/Laboratory Experiments/Activities etc.**

1	Introduction to different styles. (Chic, exotic, classic, glamour's, sexy, sophisticated, tomboy, Goth etc.) <ul style="list-style-type: none"> <li>• Areas of study include fashion appreciation – historical and contemporary, art style to understand fashion as a social phenomenon.</li> <li>• Presentation techniques</li> <li>• Material sourcing.</li> </ul>
2	Elements Of Fashion Styling – Skirts, Blouses Dresses Trousers Accessories, Trimming and technique
3	Understanding Styling and Grooming
4	Styling and Grooming For Different Occasion Formal Wear, Party Wear –Indian and Western Wear, Casual wear , Beach Wear etc. for Men and Women
5	Pattern making, grooming and styling of any one individual for an occasion considering necessary requirements

**TC 408 (ACE 3)**

**Research Project Based on Trends and Issues in the subject**

**Research Project should consist following chapters:**

- Introduction
- Review of literature
- Methodology/ Materials and methods
- Result and discussion
- Summary and conclusion
- Reference (APA style)
- Appendix

**Instruction**

- Research project report should be according to standard norms of scientific writing.
- Internal assessment will be on the seminar presentations
  - Before finalization of the topic
  - Mid review
  - Final presentation
- Plagiarism check report is mandatory with report