**M. Sc. TEXTILES AND APPAREL DESIGN**

**Syllabus**

**(With effect from 2025 - 2026)**

**Program Code: TEXA**



**DEPARTMENT OF TEXTILES AND APPAREL DESIGN**

**Bharathiar University**

**(A State University, Accredited with “A++” Grade by NAAC and**

**21st Rank among Indian Universities by MOE-NIRF)**

**Coimbatore 641 046, INDIA**

**BHARATHIAR UNIVERSITY, COIMBATORE - 641046**

**DEPARTMENT OF TEXTILES AND APPAREL DESIGN**

**MISSION**

* To serve as a knowledge and skill hub for the professional development of students.
* To impart theoretical and practical training in advanced areas of Textiles and Apparel studies.
* To serve the textile industry and the society with creative research outcomes for further developments.
* To develop the competency of students in textiles and apparel for their excellence in career.

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| **Program Educational Objectives (PEOs)** | |
| After undergoing the M.Sc. Textiles and Apparel Design program students will be able to | |
| **PEO1** | Become a successful apparel designer by exploring the current market trends globally and communicate effectively with the society by designing, marketing and visual presentations. |
| **PEO2** | Apply domain knowledge in Textiles to create innovative products for specific requirements following global standards and professional ethics. |
| **PEO3** | Develop eco-friendly textile products in support of environmental sustainability. |

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| **Program Specific Outcomes (PSOs)** | |
| After the successful completion of M.Sc. Textiles and Apparel Design program, the students are expected to | |
| **PSO1** | Gain knowledge in selection, identification of fibres, yarn and fabrics for various end uses. |
| **PSO2** | Be well trained to work in garment industry as production operator or merchandiser. |
| **PSO3** | Gain hands on experience in selection of dyes, printing, finishing which will help the students to work in wet processing unit or they can start their own Entrepreneur work. |
| **PSO4** | Gain knowledge on technical textiles that will help students towards designing smart, innovative apparels for various applications from sportswear to protective clothing. |
| **PSO5** | Ability to test and assess quality parameters of various textile materials as per the global standards at testing laboratories. |
| **PSO6** | Gain knowledge on CAD application that will help students to design patterns fit for individuals looking into current fashion trends. |
| **PSO7** | Gain knowledge in research that will help students to create newer designs suitable for present scenario and current market trends. |
| **PSO8** | Apply knowledge about Eco textiles which will help in selection of right eco fabrics, prints and finishes to save environment. |
| **PSO9** | Gain knowledge on quality standards implementation and quality requirements for apparel industry make them suitable to work as quality manager. |

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| **Program Outcomes (POs)** | |
| On successful completion of the M. Sc. Textiles and Apparel Design program the students will gain | |
| **PO1** | **Domain knowledge**: Apply the specialized knowledge of textile science to find solution for complex scientific problems related to textile and apparel industry. |
| **PO2** | **Problem analysis & innovative solution**: Identify, formulate, review of research literature and analyze complex problems of textiles. |
| **PO3** | **Design/development of solutions**: Design solutions for industry needs considering the public health and safety, culture, society and the environment. |
| **PO4** | **Conduct Research on complex problems**: Use research-based knowledge including design of experiments, interpretation of data and synthesis of information to provide valid conclusions. |
| **PO5** | **Modern tool usage**: Create, select, and apply appropriate techniques, resources, modern technology and IT tools including prediction and modeling to complex scientific activities with an understanding of the limitations. |
| **PO6** | **Textile Industry and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional practice |
| **PO7** | **Environment and sustainability**: Understand the impact of the scientific and technological solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development pertaining to apparel industry. |
| **PO8** | **Individual and team work for project management and finance**: Function effectively as an individual, and as a member or leader in diverse teams, to manage projects in textile and apparel industry. |
| **PO9** | **Communication**: Communicate effectively with all the stake holders of textile, apparel industry and the society at large, such as, being able to comprehend and write effective reports, design documentation, make effective presentations and give and receive clear instructions. |
| **PO10** | **Life-long learning**: Recognize the need, prepare and engage in independent, life-long learning in the broadest context of technological change in Apparel Industry. |

**BHARATHIAR UNIVERSITY, COIMBATORE - 641 046**

**M. Sc. Textiles and Apparel Design Curriculum (University Department)**

*(For the students admitted during the academic year 2025-2026 onwards)*

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course Code** | **Title of the Course** | | | | **Credits** | **Hours/week** | | **Maximum Marks** | | |
| **Theory** | **Practical** | **CIA** | **ESE** | **Total** |
|  | **FIRST SEMESTER** | | | | | | | | | |
| 13A | Core-1 | Textile Science and Apparel Designing | | | 4 | 4 | - | 25 | 75 | 100 |
| 13B | Core-2 | Technical Textiles | | | 4 | 4 | - | 25 | 75 | 100 |
| 13C | Core-3 | Apparel Production Technology | | | 4 | 4 | - | 25 | 75 | 100 |
| 1EA | E1ective-1 | Fashion Concepts and Designing | | | 4 | 4 | - | 25 | 75 | 100 |
| 1EB | Apparel Marketing and Merchandising | | |
| 1EC | Textile Biotechnology | | |
| 1ED | Technical Textiles - 1 | | |
| 13P | Practical-1 | Apparel Computer Aided Designing | | | 4 | - | 5 | 25 | 75 | 100 |
| 13Q | Practical-2 | Fabric Formation Techniques | | | 4 | - | 5 | 25 | 75 | 100 |
| 1GS88 | Supportive | Clothing Care | | | 2 | 2 | - | 12 | 38 | 50 |
| 1JA | Cert.Cour. | Job Ori. Cert. Course – 1 | | Fashion Designer | 2 | 2 | - | 50 | - | 50 |
|  |  | Mentor/Library/Seminar/Test/Extension Activities | | | - | 2 | - | - | - | - |
| **Total** | | | | | **28** | **22** | **10** |  |  | **700** |
|  | **SECOND SEMESTER** | | | | | | | | | |
| 23A | Core-4 | Advanced Textile Processing | | | 4 | 4 | - | 25 | 75 | 100 |
| 23B | Core-5 | Research Methodology & Statistics | | | 4 | 4 | - | 25 | 75 | 100 |
| 23C | Core-6 | Textile and Apparel Testing | | | 4 | 4 | - | 25 | 75 | 100 |
| 2EA | E1ective-2 | Home Science | | | 4 | 4 | - | 25 | 75 | 100 |
| 2EB | Home Textiles | | |
| 2EC | Applied Physics and Chemistry | | |
| 2ED | Technical Textiles - 2 | | |
| 23P | Practical-3 | Textile Testing | | | 4 | - | 5 | 25 | 75 | 100 |
| 23Q | Practical-4 | Advanced Garment Construction | | | 4 | - | 5 | 25 | 75 | 100 |
| 2GS113 | Supportive | Sustainable Fashion | | | 2 | 2 | - | 12 | 38 | 50 |
| 2VA\* | Val.Added. | Value Added Course -1 | Kalamkari | | 4 | 2 | - | 100 | - | 100 |
|  |  | Mentor/Library/Seminar/Test/Extension Activities | | | - | 2 | - | - | - | - |
| **Total** | | | | | **30** | **22** | **10** |  |  | **750** |

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|  | **THIRD SEMESTER** | | | | | | | | | |
| **Course Code** |  | **Title of the Course** | | | **Credits** | **Theory** | **Practical** | **CIA** | **ESE** | **Total** |
| 33A | Core-7 | Apparel Quality Standards and Implementation | | | 4 | 4 | - | 25 | 75 | 100 |
| 33B | Core-8 | Textile Industry and Management | | | 4 | 4 | - | 25 | 75 | 100 |
| 33C | Core-9 | Eco-Textiles and Sustainability | | | 4 | 4 | - | 25 | 75 | 100 |
| 3EA | E1ective-3 | Clothing Care and Maintenance | | | 4 | 4 | - | 25 | 75 | 100 |
| 3EB | Clothing Appearance and Fit | | |
| 3EC | Nanotechnology in Textiles | | |
| 3ED | Technical Textiles - 3 | | |
| 33P | Practical-5 | Traditional Textiles of India | | | 4 |  | 5 | 25 | 75 | 100 |
| 33Q | Practical-6 | Portfolio Presentation and Viva voce | | | 4 |  | 5 | 25 | 75 | 100 |
| 37V# |  | Internship Report and Viva voce | | | 2 | - | - | 50 | - | 50 |
| 3GS17 | Supportive | Fashion Concepts | | | 2 | 2 | - | 12 | 38 | 50 |
|  |  | Health & Wellness | | | 1 | - | 2 |  |  | 100 |
|  |  | Mentor/Library/Seminar/Test/Extension Activities | | | - | 2 | - | - | - | - |
| 3JA\* | Cert.Cour. | Job Ori. Cert. Course – 2 | Assistant Designer –  Home Furnishing | | 2 | 2 | - | 50 | - | 50 |
| **Total** | | | | | **31** | **22** | **12** |  |  | **850** |
|  | **FOURTH SEMESTER** | | | | | | | | | |
| 43P | Practical-7 | Boutique Management and online Business | | | 4 | - | 5 | 25 | 75 | 100 |
| 47V | Project | Project work & Viva voce | | | 6 | - | - | 40 | 110 | 150 |
|  |  | Mentor/Library/Seminar/Test/Extension Activities | | | - | 2 | - | - | - | - |
| 4VA | Val. Added | Value Added Course -2 | | Mural Painting | 4 | 2 | - | 100 | - | 100 |
| 4NS\* | Swayam | Professional Certification Course | | | 2 | - | - | - | - | - |
| **Total** | | | | | **16** | **4** | **5** |  |  | **350** |
| **Grand Total** | | | | | **105** | **70** | **37** |  |  | **2650** |
| \*Co-Scholastic Courses  # Internship for 15 days after II Semester  The final grading and ranking will only be based on scholastic courses. However, the award of the degree requires  the mandatory completion of co-scholastic courses. | | | | | | | | | | |

**Distribution of Marks for Continuous Internal Assessment (CIA) and Comprehensive External Examinations (CEE)**

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| --- | --- | --- | --- | --- | --- | --- |
| **Paper** | **Maximum marks** | **Marks for** | | **Components for CIA** | | |
| **CIA** | **CEE** | **Tests** | **Assignment** | **Others\*** |
| Theory (Core/Elective) | 100 | 25 | 75 | 15 | 05 | 05 |

**\*Components for ‘others’ may include the following:**

Class Participation, Case Studies Presentation, Field Work, Field Survey, Group Discussion, Term Paper, Workshop/ Conference Participation, Presentation of Papers in Conferences, Quiz, Report/ Content Writing, Seminars, etc.

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| --- | --- | --- | --- | --- | --- | --- |
| **Paper** | **Maximum marks** | **Marks for** | | **Components for CIA** | | |
| **CIA** | **CEE** | **Tests** | **Observation** | **Record** |
| Practical  (Core/Elective) | 100 | 25 | 75 | 15 | 05 | 05 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Paper** | **Maximum marks** | **Marks for** | | |
| **CIA** | **CEE** | |
| **Evaluation** | **Viva-voce** |
| Project | 150 | 40 | 75 | 35 |

**Pattern of Question Paper- (for core- theory and elective subjects)**

The question paper for each of the core and elective papers shall consist of three sections. While Section A shall contain 10 objective type questions, Section B and Section C shall contain questions of descriptive nature. Internal choice (either / or type) shall be given in Section B and Section C. In Section A, there shall be two questions each with four multiple choices from each of the five units. In Sections B and C, there shall be one question with internal choice (either/or type) from each of the five units. The composition of the question paper shall be as given below:

**Time: Three Hours Max. Marks: 75**

**Section A (10 x 1=10)**

**Answer all the questions**

**Each question carries one mark**

**Choose the correct answer**

**Q. No.1.-Q. No. 10-Objective questions with four multiple choices**

**Section B-(5 x 5 = 25)**

**Answer all the questions**

**Each question carries five marks**

**Q. No. 11-Q. No. 15-Questions with internal choices (either (a) or (b) type)**

**Section C (5 x 8 = 40)**

**Answer all the questions**

**Each question carries eight marks**

**Q. No. 15-Q. No. 20-Questions with internal choices (either (a) or (b) type)**

**Pattern of Question Paper (for core - practical course)**

The question paper for each of the core - practical papers is as follows

**Time: Four Hours Max. Marks: 75**

**Answer all the marked questions**

**Pattern of Question Paper- (for supportive course)**

The question paper for each of the supportive papers shall consist of three sections. While Section A shall contain 5 objective type questions, Section B and Section C shall contain questions of descriptive nature. Internal choice (either/or type) shall be given in Section B and Section C. In Section A, there shall be one question each with four multiple choices from each of the five units. In Sections B, there shall be one question with internal choice (either/or type) from each of the five units and in Section C, there shall be three questions with internal choice (either/or type from all the five units. The composition of the question paper shall be as follows:

**Time: Two Hours Max. Marks: 38**

**Section A (5 x 1= 5) Answer All the questions**

**Each question carries one mark**

**Q. No.1.-Q. No. 5- Objective questions with four multiple choices**

**Section B (5 x 3 = 15)**

**Answer all the questions**

**Each question carries three marks**

**Q. No. 6-Q. No. 10 - Questions with internal choices (either (a) or (b) type)**

**Section C (3 x 6 = 18)**

**Answer all the questions**

**Each question carries six marks**

**Q. No. 11-Q. No. 13 - Questions with internal choices (either (a) or (b) type)**

**Eligibility for Admission**

A pass in B.Sc. Costume Design and Fashion / Textiles and Apparel Design / Textiles and Fashion Design / Textile and Clothing or any B.Sc. or B.Voc. degree related to Textiles or Fashion or Apparels, B.Sc. Home Science / Physics / Chemistry / Botany / Zoology / Microbiology / Biotechnology / Biochemistry and allied subjects.

# Internship & Viva Voce

After completion of first and second semesters of study the students have to undergo Internship for a period of 15 days minimum and Internship report has to be submitted. The Internship report is evaluated by the class Tutor and countersigned by the HOD. This report must be presented by the candidate and reviewed by class Tutor and HOD during Viva Voce Examination.

# Industrial Visit

Students are encouraged for an Industrial / Institutional visit and have to submit report for evaluation.

# Project work & Viva Voce

The project thesis is the bonafide work carried out by the candidate under the guidance of a faculty authenticated and countersigned by the HOD. This project work must be presented and defended by the candidate and reviewed by external examiner during Viva Voce Examination.

**SEMESTER I**

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| **Course code** | | | **13A** | | **TEXTILE SCIENCE AND APPAREL DESIGNING** | **L** | | | | | **T** | **P** | | **C** |
| **Core** | | | | | 4 | | | | | - | - | | 4 |
| **Pre-requisite** | | | | | Basic knowledge about Fundamentals of Textile science and Apparel Designing | **Syllabus Version** | | | | | 2025 - 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Study about Natural fiber, Man-made fibers. 2. Learn about Yarn Manufacturing 3. Fabric forming by Weaving, knitting and Non Woven Methods 4. Gain knowledge about seams, plackets 5. Acquire knowledge about Methods of Pattern making | | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | Name Natural fiber and its Classifications in detail | | | | | | | | | | | | K1 | |
| 2 | Understand Yarn manufacturing and various methods | | | | | | | | | | | | K2 | |
| 3 | Analyze Fabric manufacturing by Weaving, knitting and Non Woven | | | | | | | | | | | | K4 | |
| 4 | Apply seams, plackets and collars | | | | | | | | | | | | K3 | |
| 5 | Understand about Methods of Pattern making | | | | | | | | | | | | K2 | |
| **K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyze; K5 - Evaluate; K6 – Create** | | | | | | | | | | | | | | |
| **Unit:1** | | | | **Textile Fibers** | | | | | | **12 hours** | | | | |
| **Textile fibers**: Natural fibers-Cotton, linen, wool, jute and silk. Man-made fibers and Synthetic fibers –Polyester, Nylon, Tencel, viscose. lycra, acrylic, Uses and properties of fibers. Latest development in textile fibers | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:2** | | | | **Yarn Manufacturing** | | | | | **12 hours** | | | | | |
| **Yarn Manufacturing:** Yarn manufacturing process**,** classification of yarns and its uses, sewing threads-uses, classification, finishes, characteristic and qualities. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | **Fabric Manufacturing** | | | | **12 hours** | | | | | | |
| **Weaving:** Looms and its classification, Basic weaves and its variation, Latest Techniques in fabric manufacturing, 3D Spacer fabrics.  **Knitting:** Types of knitting-weft knitting-single jersey, purl, rib, interlock. Warp knitting-Tricot and Raschel. Uses and Properties.  **Non-Woven:** Non-woven production cycle, Classification of non-woven fabrics, Finishing Methods, Laminates, Bonding and Flocking | | | | | | | | | | | | | | |
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| **Unit:4** | | | | **Fundamentals of Apparel Production** | | | | **10 hours** | | | | | | |
| **Fundamentals of Apparel Production**-Parts and functions of a single needle machine, Seam and Seam finishes, Plackets, Collars, Pockets, Sleeves and Skirts | | | | | | | | | | | | | | |
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| **Unit:5** | | | | **Pattern Making** | | | **12 hours** | | | | | | | |
| **Patternmaking** -Important and principles of taking Body measurements, Methods of pattern making – Drafting, draping and Flat pattern techniques, Types of paper patterns -Patterns for personal measurements and commercial patterns, Principles of pattern drafting. Layout and its types. Economy of fabric in placing patterns, Adjusting fabrics to patterns. Design and construct any one garment. | | | | | | | | | | | | | | |
| **Unit:6** | | | | **Contemporary Issues** | | | **02 hours** | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars 3. Sample collection for fiber, yarn, woven fabric, knitted fabric and Non-woven fabric. | | | | | | | | | | | | | | |
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| **Total Lecture hours** | | | | | | | **60 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | | Textile Science, E.P.G. Gohl and L.D. Vilensky, 2nd Ed., Guilford, 1984. | | | | | | | | | | | | |
| 2 | | Technology of short – staple spinning, W.D. Klein, Textile Institute, Manchester, 1998. | | | | | | | | | | | | |
| 3 | | Principles of weaving, R.Mark and A.T.C Robinson, Textile institute Manchester, 1986. | | | | | | | | | | | | |
| 4 | | Mechanism of Weaving, N.N. Banner.J. I Vol – I &II Textile Institute, Fairchild, 1990. | | | | | | | | | | | | |
| 5 | | Handloom weaving technology, Fannin, Allen .A, Green editorial, 1998. | | | | | | | | | | | | |
| 6 | | Handbook of Nonwovens,1st edition, S.Russell, Woodhead, 2006. | | | | | | | | | | | | |
| 7 | | Practical clothing construction -part I and part-II, Mary Mathews, cosmic press Chennai. 1986 | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | | Introduction to Textile Fibers, H.V.S Murthy,WPI,2016 | | | | | | | | | | | | |
| 2 | | Textile Science and clothing technology, [Subramanian Senthilkannan Muthu](https://link.springer.com/search?), Springer 2020 | | | | | | | | | | | | |
| 3 | | E.P.G. Gohl, L.D. Vilensky, Textile science, Longman Cheshire Pty Limited, 1983 | | | | | | | | | | | | |
| 4 | | Textiles: Pearson New International Edition, Kadolph S J Pearson Education Ltd, 2013 | | | | | | | | | | | | |
| 5 | | Textbook of Textiles and Clothing, Vatsala, R,Indian Council of Agriculture Research, 2003 | | | | | | | | | | | | |
| 6 | | Textbook of Fabric Science-Fundamentals to Finishing, seems sekhri, PH I Learning Private Limited, 2011. | | | | | | | | | | | | |
| 7 | | The principles of knitting: Methods and techniques of hand knitting. Hiatt, June Hemmons, Simon & Schuster, 2012. | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <https://nptel.ac.in/courses/116/102/116102026/> | | | | | | | | | | | | |
| 2 | | <https://sctevtodisha.nic.in/wp-content/uploads/2019/07/3RD-sem-syallbus-Textile-Tech.pdf> | | | | | | | | | | | | |
| 3 | | <https://swayam.gov.in/nd2_cec19_te01/preview> | | | | | | | | | | | | |
| 4 | | <http://eacharya.inflibnet.ac.in/data-server/eacharya-documents/53e0c6cbe413016f234436ed_INFIEP_8/9/ET/8_ENG-9-ET-V1-S1__lesson.pdf> | | | | | | | | | | | | |
| 5 | | <https://textilelearner.blogspot.com/2020/01/important-questions-and-answers-about.html> | | | | | | | | | | | | |
| 6 | | <https://www.craftyarncouncil.com/standards/yarn-weight-system> | | | | | | | | | | | | |
| 7 | | <https://www.slideshare.net/prafullnik/yarn-manufacturing-process-carding> | | | | | | | | | | | | |
| 8 | | <https://www.youtube.com/watch?v=U1bk4ZI0Qvc> | | | | | | | | | | | | |
| 9 | | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/145> | | | | | | | | | | | | |
| **Course Designed By:** Dr.M.Sumithra | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | M | S | M | S | S | M | S | S | M | S |
| **CO2** | S | S | M | S | M | S | M | S | M | L |
| **CO3** | S | S | S | S | M | S | S | S | M | S |
| **CO4** | S | S | S | S | S | S | S | S | S | M |
| **CO5** | S | S | S | M | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course code** | | | | **13B** | | **TECHNICAL TEXTILES** | **L** | **T** | | | | **P** | | **C** |
| **Core** | | | | | | **4** | **-** | | | | **-** | | **4** |
| **Pre-requisite** | | | | | | Basic knowledge about Textile science | **Syllabus Version** | | | | 2025-2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about fibers and methods used for the production of Technical Textiles 2. Learn in detail about the classifications of Technical Textiles 3. Learn about the application of the Technical Textiles in various fields | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | | Identify textile fibers used in technical textiles products | | | | | | | | | | K1 | |
| 2 | | | Understand the various applications of Technical Textiles | | | | | | | | | | K2 | |
| 3 | | | Apply their knowledge about contribution of technical textiles in various fields | | | | | | | | | | K3 | |
| 4 | | | Analyse and Evaluate the different types of technical textiles products in the market. | | | | | | | | | | K4&K5 | |
| 5 | | | Design products for the application of technical textile products in the industry. | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | | | |
| **Unit:1** | | | | | **Technical Textiles** | | | | | **10 hours** | | | | |
| Introduction to Technical Textiles, Definition, Classification, Applications, Globalization, Scope and Future of Technical Textiles industry.  **Technical Fibers:** High – Strength and high-modulus organic fibers, High chemical and combustion - resistant organic fibers, High performance inorganic fibers, Ultra-fine and novelty fibe**rs.**  **Nonwovens:** Overview of Nonwovens, Nonwoven making Processes, Application of Nonwovens  **Composites:** Introduction to Composites**,** Methods of Manufacturing Composites, Application of Composites. | | | | | | | | | | | | | | |
| **Unit:2** | | | | | **Medical Textiles, Agro Textiles & Cloth tech** | | | | **12 hours** | | | | | |
| **Medical Textiles:** Introduction, Fibers used, Properties, Classification- Non – Implantable, Implantable, Extra corporal devices, Health care /Hygiene Products and Applications. Wearable assistants for mobile health monitoring. Recent trends in Medical Textiles.  **Agro Textiles** – **-** Introduction, fibers used Types, functions and properties, Characteristics and Applications in Agro products and in its field. Latest developments in Agro Textiles.  **Cloth Tech:** Introduction, fabrics used, Types, functions and properties, Characteristics and Applications of Cloth Tech. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Build Tech, Geo Textiles, Pack Tech & Oeko Tech** | | **12 hours** | | | | | | | |
| **Build Tech: -** Introduction, fibers used Types, functions and properties, Characteristics and Applications in Architecture and in Building Construction. Recent Advancement in Build Tech.  **Geo textiles: -** Introduction, fibers used Types, functions and properties, Characteristics and Applications in its field. Recent developments in Geo Textiles.  **Pack Tech:** Introduction, Types of fibers, functions and properties, Characteristics and Applications of Pack Tech. Recent trends in Pack Tech.  **Oeko Tech:** Introduction, fibers, functions and properties. Characteristics and Applications of Oeko Tech. Latest trends in Oeko Tech. | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Protective Textiles, Indu Tech & Mobil Tech** | | **12 hours** | | | | | | | |
| **Protective Textiles:** Introduction, fibers used Types, functions and properties, Characteristics and Applications Fire Protective clothing, Heat – resistant garments, Water proof materials, Ballistic resistant Vests, Biological and chemical Vests, Military Protective clothing. Smart polymers used in Protective clothing. Recent developments in protective textiles.  **InduTech –** Introduction, fibers used – types, functions and properties and characteristics.  Applications and Latest trends in its field.  **Mobil Tech:** Introduction, fibers used, Types, functions and properties, Characteristics and Applications of Mobil Tech. Latest trends in Mobil Tech. | | | | | | | | | | | | | | |
| **Unit:5** | | | | | **Sports Textiles, Home Textiles & Smart and Intelligent Textiles** | | **12 hours** | | | | | | | |
| **Sports Textiles:** Introduction, fibers used, Types, functions and properties, Characteristics and Applications of Sports Tech. Latest trends in Sports Tech.  **Home Textiles:** Introduction, fibers, functions and properties, Characteristics and Applications of Home Tech. Recent trends in Home textiles.  **Smart and Intelligent Textiles** – Classification – Active smart, passive smart and very smart textiles and – Phase change materials, shape memory polymers, chromic and conductive Materials and its applications in various Wearable technology. Role of artificial intelligence in smart and Intelligent textiles. | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | **02 hours** | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | **60 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Hand book of Technical textiles, A. R. Horrocks and S. C. Anand, Wood head publishing ltd, England, 2000 | | | | | | | | | | | | | |
| 2 | Technical Textiles and its Application, Dr.S.Grace Annapoorani, LASER Park Publishing House, India, 2017 | | | | | | | | | | | | | |
| 3 | Textiles for Industrial Applications, R Senthil Kumar, CRC Press, 2013 | | | | | | | | | | | | | |
| 4. | Albrecht, W., Fuchs, H., and Kittelmann, W., Nonwoven fabrics: Raw materials, manufacture, applications, characteristics, testing processes, Wiley-VCH, 2002 (Edited). | | | | | | | | | | | | | |
| 5. | Analysis and Performance of Fiber Composites, Agarwal, B.D. and Broutman, L. J., John Wiley & Sons.(2012) | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | Textile Fibers: Developments and Innovations, Kothari, V., New Delhi: IAFL Publications, 2000. | | | | | | | | | | | | | |
| 2 | Handbook of Industrial Textiles, Sabit Adanur, Wellington Sears CRC Press ,1995 | | | | | | | | | | | | | |
| 3 | Agro Textiles and its Application, Dr.S.Grace Annapoorani, Wood head publishing ltd, India , 2018 | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/130> | | | | | | | | | | | | |
| 2 | | https://www.textile Learner blogspot.con | | | | | | | | | | | | |
| 3 | | <https://textilelearner.blogspot.com/2020/03/nfc-embedded-smart-textiles.html> | | | | | | | | | | | | |
| 4 | | <https://www.technical-textiles.net> | | | | | | | | | | | | |
| 5 | | <https://www.sciencedirect.com/topics/materials-science/smart-textiles> | | | | | | | | | | | | |
| **Course Designed By:**Dr.S.Grace Annapoorani | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | S | L | S |
| **CO2** | S | S | S | S | M | S | S | S | L | S |
| **CO3** | S | S | S | M | S | S | S | S | L | S |
| **CO4** | S | M | S | M | M | S | S | S | M | S |
| **CO5** | S | M | S | S | S | S | S | S | M | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **13C** | **APPAREL PRODUCTION TECHNOLOGY** | **L** | | | **T** | | **P** | **C** |
| **Core** | | | | | 4 | | | - | | - | 4 |
| **Pre-requisite** | | | | | Basic knowledge about apparel industry | **Syllabus Version** | | | | 2025 – 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Give an overview of apparel manufacturing industry. 2. Familiarize students about apparel production processes and finishing. 3. Explain about apparel production planning and control. | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | | | Understand complete functioning of apparel manufacturing industry. | | | | | | | | K2 | |
| 2 | | | Analyze apparel production processes. | | | | | | | | K4 | |
| 3 | | | Analyze finishing and packing. | | | | | | | | K4 | |
| 4 | | | Understand apparel production planning and control. | | | | | | | | K2 | |
| 5 | | | Evaluate plant loading and capacity planning | | | | | | | | K5 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Unit:1** | | | | **Apparel Manufacturing Industry** | | | | **12 hours** | | | | |
| Nature and Scope. Major functions of apparel manufacturing - Engineering and Management functions. Material flow in apparel industry. Basic types of apparel production process: Make through system, Group system, Whole garment production system, Assembly line system – Progressive bundle system and Unit production system. Apparel trade associations – AEPC, TEA, GEA, AHEA, CMAI, CAA, AEMA. Artificial Intelligence (AI) and its application in apparel industry. Cloud computing in apparel industry. | | | | | | | | | | | | |
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| **Unit:2** | | | | **Spreading, Cutting and Sewing** | | | **12 hours** | | | | | |
| **Apparel Production Processes:** Introduction to Garment Cutting, Marker Planning, Efficiency of Marker, Methods of Marker Planning, Spreading of the fabric to form a lay, Spreading Requirements, Methods of Spreading, Fabric Packages, Objectives of Cutting, and Methods of Cutting. Automation in spreading, cutting and sewing. Robotics for 3D sewing operations.  **Seam & Stitch:** Introduction to Seam and Stitch, Stitch Classification, Stitch Structure, Seam Formation, Joining Material, Surface Characteristics, Seam Appearance, Damages (Thermal and Mechanical), Seam Performance, Seam Degradation, Seam Failure and Seam Testing. Sewing thread and selection of sewing thread for different fabrics. | | | | | | | | | | | | |
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| **Unit:3** | | | | **Finishing and Packing** | | **12 hours** | | | | | | |
| **Apparel Finishing:** Importance of Garment pressing and finishing, Types of Garments, pressing of Garments and Specialty Garment Finishes.  **Quality Checking:** Inspection, Interactive bar coding, needle detection.  **Packaging and ware housing:** Types of packing and packing materials, quality specification, merchandise packing and shipping packing. Intra transport, ware housing, computerized storage systems. Automation in material handling. | | | | | | | | | | | | |
| **Unit:4** | | | | **Production Planning and Control** | | **12 hours** | | | | | | |
| **Production Control:** Definition, objectives of production control, co-ordination of production control department with other departments in the apparel industry. Pre-production functions – product acceptance, steps from prototype to production model, order requirements.  **Work study**: Definition, Purpose, Techniques of work study. Procedure of work study. Work study in apparel industry. Time and motion study in apparel industry. | | | | | | | | | | | | |
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| **Unit:5** | | | | **Plant Loading and Capacity Planning** | | **10 hours** | | | | | | |
| Determination of machinery requirements for a new factory, calculation of labour requirements, application of line balancing techniques – Balance control. Advanced tools and equipment in industrial engineering. | | | | | | | | | | | | |
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| **Unit:6** | | | | **Contemporary Issues** | | **02 hours** | | | | | | |
| 1. Prepare a record of fabric (Plain, twill, etc.,) collection with properties; identification of seam and its types. 2. Learn industry related terminologies 3. Expert lectures, online seminars – webinars | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | **60 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | |
| 1 | Apparel Manufacturing Technology, T.Karthick et al, CRC Press, 2016. | | | | | | | | | | | |
| 2 | Garment Manufacturing Technology, Rajkishore Nayak & Rajiv Padhye, Elsevier,2015. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | |
| 1 | Industrial Engineering in Apparel Production, V.RameshBabu, Elsevier Science &Technology, 2017. | | | | | | | | | | | |
| 2 | Automation in Garment Manufacturing, Ed. Rajkishore Nayak& Rajiv Padhye, Woodhead Publishing, 2017. | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | |
| 1 | | <https://ncert.nic.in/textbook/pdf/lehe203.pdf> | | | | | | | | | | |
| 2 | | <https://www.youtube.com/watch?v=KV7BvBziXvs> | | | | | | | | | | |
| 3 | | <http://texmin.nic.in/sites/default/files/Garment%20Study%20-%20Final%20Report%20-%2026.02.2018.pdf> | | | | | | | | | | |
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| **Course Designed By:** Dr.K.Amutha | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | L | M | L | S | M | L | S | S | S |
| **CO2** | S | S | S | S | S | L | M | S | S | S |
| **CO3** | S | S | S | M | S | L | S | S | S | S |
| **CO4** | S | S | S | S | S | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S | M | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **1EA** | | **FASHION CONCEPTS AND DESIGNING** | | **L** | | | | **T** | | **P** | **C** |
| **Elective** | | | | | | 4 | | | | - | | - | 4 |
| **Pre-requisite** | | | | | | Basic knowledge about Designing Costumes | | **Syllabus Version** | | | | | 2025 – 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Apply knowledge of designs effectively 2. Implement the learned concepts as a designer. 3. Study about the colouring & texture for fashionable design. 4. Develop wardrobe collection for different seasons. 5. Design costumes for different themes. | | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | |
| 1 | | | Apply designs concepts and techniques effectively | | | | | | | | | | | K3 | |
| 2 | | | Create and Implement the design concepts in dress designing | | | | | | | | | | | K6 | |
| 3 | | | Create and Explore the colouring & texture for designing | | | | | | | | | | | K6 | |
| 4 | | | Create garment designing based on the principles of designs | | | | | | | | | | | K6 | |
| 5 | | | Apply the illustrated designs on different types of clothing | | | | | | | | | | | K3 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | | | | |
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| **Unit:1** | | | | | **Basic Elements of Designing** | | | | | | **11 hours** | | | | |
| Elements Of Design: - Basic Elements - Designing of costumes using elements of design - line, dot, curves, texture, shine, rough, silhouettes, color - Define Application of Principles: Balance, rhythm, harmony, repetition, grading, unity, symmetry. | | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Color Theory** | | | | | **12 hours** | | | | | |
| Colour Theory:- Color Theory: Color wheel - primary, secondary, transparency - Techniques of color mixing - Color Contrast and Attributes: interaction, harmony, psychology, mood, culture and expression - Composition: Color, space, movement, balance, asymmetry, rhythm, shapes, proportion - Aspects / temperature of color-warm cool, hot, cold, dark, pale and bright - Application of Principles in garment Designing for latest trends - Dimensions of color- hue, Intensity, value, chroma - Basic color schemes- achromatic, analogues, monochromatic, complimentary, and neutral –Rendering techniques. | | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Textures and Design** | | | | **11 hours** | | | | | | |
| Textures and Design - Textures-types of textures - Textural effects, using textures in designs – Color and texture of the fabric. Design feature, Personal appearance and fit for different figure types | | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Indian and Global Fashion Designers** | | | | **12 hours** | | | | | | |
| An overview on Indian and global Fashion designers, Understanding Fashion designer – types – classicist, idealist, influenced, realist and thinking poet. Indian Fashion designers– Haute couture – Manish Malhotra, Wendell Rodricks, Abu Jani and Sandeep Khosla, TarunTahiliani, JJ Valaya, Rina Dhaka, Manish Arora, Rohit Bal, Ritu Beri, Ritu Kumar, Omi Gurung, Shilpa Reddy, Vikram Phadnis, Neeta Lulla, Erum Ali, Payal Jain.  **Global Fashion designers-** France, Italy, America, Britain, Fareast- Contributions of well known designers from France-[Agnes,](http://en.wikipedia.org/wiki/Madame_Agnes) [Sophie Albou](http://en.wikipedia.org/wiki/Madame_Agnes) Italy- [Pierre Cardin,](http://en.wikipedia.org/wiki/Pierre_Cardin) [Roberto Cavalli](http://en.wikipedia.org/wiki/Pierre_Cardin) America - [Adams](http://en.wikipedia.org/wiki/Osceola_Macarthy_Adams) [Adrian,](http://en.wikipedia.org/wiki/Osceola_Macarthy_Adams) [Joseph Abboud](http://en.wikipedia.org/wiki/Joseph_Abboud). Britain -[Basso & Brooke](http://en.wikipedia.org/wiki/Basso_%26_Brooke) and Fareast Countries - Sandy Powell, [Valentino](http://www.bykoket.com/blog/wish-list-beautiful-haute-couture-wedding-dresses/) Garavani. | | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Designing Costumes for Different Themes** | | **12 hours** | | | | | | | | |
| Personal appearance and fit. To develop wardrobe collection for different seasons and design costumes for different themes. | | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | **02 hours** | | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | **60 hours** | | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | | |
| 1 | Fashion Design, JaniceG.Ellinwood, Fairchild Books, colour illustrations, 2011. | | | | | | | | | | | | | | |
| 2 | Fashion Color Harmony, Hibeaki, Publisher Rockford, 2016. | | | | | | | | | | | | | | |
| 3 | TheArt of Costume and Personal Appearance By Grace Margaret Morton, 1964. | | | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | | | |
| 1 | Fashion Rendering with Color, Bina Abling, 2000. | | | | | | | | | | | | | | |
| 2 | Individuality in Clothing Selection and Personal Appearance Hardcover – Import,[Suzanne Marshall](http://www.amazon.in/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&amp;field-author=Suzanne%2BMarshall&amp;search-alias=stripbooks) , [Hazel Jackson](http://www.amazon.in/s/ref%3Ddp_byline_sr_book_2?ie=UTF8&amp;field-author=Hazel%2BJackson&amp;search-alias=stripbooks), [M. Sue Stanley Ph.D.](http://www.amazon.in/s/ref%3Ddp_byline_sr_book_3?ie=UTF8&amp;field-author=M.%2BSue%2BStanley%2BPh.D.&amp;search-alias=stripbooks) , [Mary Kefgen](http://www.amazon.in/s/ref%3Ddp_byline_sr_book_4?ie=UTF8&amp;field-author=Mary%2BKefgen&amp;search-alias=stripbooks), [Phyllis](http://www.amazon.in/s/ref%3Ddp_byline_sr_book_5?ie=UTF8&amp;field-author=Phyllis%2BTouchie-Specht&amp;search-alias=stripbooks) [Touchie-Specht](http://www.amazon.in/s/ref%3Ddp_byline_sr_book_5?ie=UTF8&amp;field-author=Phyllis%2BTouchie-Specht&amp;search-alias=stripbooks)Fashion –From concept to consumer – Gini Stephens Frings , 6th edition, prentice Hall,1999. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | |
| 1 | | <https://onlinecourses.nptel.ac.in/noc20_de01/preview> | | | | | | | | | | | | | |
| 2 | | <https://onlinecourses.swayam2.ac.in/cec19_te01/preview> | | | | | | | | | | | | | |
| 3 | | <https://www.amazon.in/Swayam-Curtain-Concept-Printed-Curtains/dp/B00MYU5YN2> | | | | | | | | | | | | | |
| 4 | | <https://slideplayer.com/slide/1521339/> | | | | | | | | | | | | | |
| 5 | | <https://slideplayer.com/slide/1521428/> | | | | | | | | | | | | | |
| 6 | | <https://www.eventbrite.com/d/online/fashion--seminars/> | | | | | | | | | | | | | |
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| **Course Designed By:** Dr.M.Jayakumari | | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | S | S | S |
| **CO2** | S | S | S | S | S | S | S | S | S | S |
| **CO3** | S | S | S | S | S | S | S | S | S | S |
| **CO4** | S | S | S | S | S | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **1EB** | | **APPAREL MARKETING AND MERCHANDISING** | | **L** | | | | **T** | | **P** | **C** |
| **Elective** | | | | | | |  | | 4 | | | | - | | - | 4 |
| **Pre-requisite** | | | | | | | Basic knowledge about marketing and merchandising | | **Syllabus Version** | | | | | 2025 – 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about marketing concepts 2. Understand the marketing strategy. 3. Know about the Role of Merchandiser 4. Recognize the need and the ability to understand Display Settings 5. Understand the Process of Entrepreneurship development | | | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | | |
| 1 | | | | Understand the Perceptions marketing environment | | | | | | | | | | | K2 | |
| 2 | | | | Apply the concepts of Apparel and Fashion Merchandising | | | | | | | | | | | K3 | |
| 3 | | | | Evaluate the principles of visual merchandising | | | | | | | | | | | K5 | |
| 4 | | | | Analyse the Fashion and the communication process | | | | | | | | | | | K3 | |
| 5 | | | | Create the Impact of Retail Merchandising & Functions of entrepreneurship | | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | | |
| **Unit:1** | | | | | | **Marketing** | | | | | | **10 hours** | | | | |
| Marketing Concepts, Marketing Management, Marketing System, Marketing environment, Marketing Organization, Strategic Marketing Process and Augmented reality marketing, Factors influencing buying behavior - Buying process segmentation: Market segmentation - Market Potential - Estimation - Demand Forecasting**.** Marketing Research: Purpose, Procedure and Applications - Case Study. Marketing of Apparel and Fashion Products. Role of Merchandiser – Types of Merchandises - Export House, Manufacturer, Buying House, Merchandising Correspondence - Orders, handling of orders and dealing with manufacturers - Advertising - Trade fair participation and other methods of sales promotion in merchandising. | | | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | | **Merchandising** | | | | | **12 hours** | | | | | |
| **Merchandising** - Merchandise – definition - Apparel and Fashion Merchandising - Role of Merchandiser – Types of Merchandises. Visual merchandising– Color and Texture, Line and Composition light and Lighting, Role of lighting in visual merchandising, Colours and types of lightings. Display and Display Settings - Types of display, Types of mannequins. Technology trends in Visual Merchandising-Interactive videos, Mobile Integration, Endless Aisles, and QR Codes, Virtual reality. Application of artificial Intelligence in Visual merchandising | | | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | | **Fashion Communication** | | | | **12 hours** | | | | | | |
| Fashion and the communication process: The Theories of fashion adoption need for promotion of fashion. Fashion writing, editing, advertising, public relations, press laws and media ethics. Visual communication-Fashion photography, window display and multimedia – audio, still images, animation, video footage and interactivity. Communication in practice, Scripting shows, conducting interviews, reporting events, fashion critics, planning PR campaigns, formulating case studies, designing catalogues and brochures. Visualization of décor and ambience, preparing short films/audiovisuals, choreography of fashion event / modelling. | | | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | | **Fashion Retailing** | | | | **12 hours** | | | | | | |
| Retail Merchandising - The Marketing Channel, Retail organization structures, retail merchandising, Retailing Formats - Department stores specialty stores, Retail Locations, Brands and Private Labels, Financial Aspects of Merchandising, Store Layout and Merchandise Presentation, Contemporary Issues | | | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | | **Entrepreneurship Development** | | **12 hours** | | | | | | | | |
| Entrepreneur – Definition and Functions of entrepreneurship - Types and problems, Characteristics of an entrepreneur, Entrepreneurship development, Process of Entrepreneurship development, Project identification - Project formulation - Feasibility analysis and report. Selection. Project appraisal – Concepts and Methods - Cash flows, Payback period, ROI Methods of minimizing risk. Steps for starting a small scale enterprise. Institutional finance to entrepreneurs - Commercial Banks. Other financial Institutions - IDBI, IFCI, ICICI, IRBI, LIC, UTI, SIDC, SIDBI, EXIM Bank, Role of Government in entrepreneurship development. Entrepreneurship in Textile Industry, Textile and MSM -MSE-Cluster Development Programme (MSE-CDP) | | | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | | **Contemporary Issues** | | **2 hours** | | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | | | |
|  | | | | | | **Total Lecture hours** | | **60 hours** | | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | | | |
| 1 | | Visual Merchandising, [Tony Morgan](https://www.amazon.in/Tony-Morgan/e/B007T191M6/ref=dp_byline_cont_book_1), Laurence King, 2011. | | | | | | | | | | | | | | |
| 2 | | Marketing Management, Philip Kotler, Printice Halllnc, 1996. | | | | | | | | | | | | | | |
| 3 | | How To Produce Successful Advertising3 E, A. D. Farbey*,* 2002 | | | | | | | | | | | | | | |
| 4 | | Merchandise Buying and Management, [John Donnellan](https://www.bloomsbury.com/us/author/john-donnellan-40436), 4th edition,2013 | | | | | | | | | | | | | | |
| 5 | | Entrepreneurship development, S. Khanka,S.Chand limited, 2006. | | | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | | | | |
| 1 | | Introduction to Fashion Merchandising, Fashion Merchandising Introduction Evelyn Grace, Prentice-Hall, 1978. | | | | | | | | | | | | | | |
| 2 | | Textiles, Sara J. kadolph, Pearson, 2010 | | | | | | | | | | | | | | |
| 3 | | Fashion Retailing: A Multi-Channel Approach Paperback , [Jay Diamond](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Jay+Diamond&search-alias=stripbooks), Ellen Diamond, [Sheri Litt](https://www.amazon.in/Sheri-Litt/e/B0034Q4Z9O/ref=dp_byline_cont_book_3) ,March 2015 | | | | | | | | | | | | | | |
| 4 | | Fashion Communication, Dr.M.Jayakumari, Laser park publications,2017 | | | | | | | | | | | | | | |
| 5 | | Entrepreneurship development, C.B. Gupta, N.P. Srinivasan, Sultan Chand & Sons, 1992. | | | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | | |
| 1 | | | <https://onlinecourses.swayam2.ac.in/cec20_mg06/preview> | | | | | | | | | | | | | |
| 2 | | | <https://onlinecourses.swayam2.ac.in/cec20_ge03/preview> | | | | | | | | | | | | | |
| 3 | | | [<https://www.classcentral.com/course/iversity-store-design-visual-merchandising-and-shopper-marketing-3366> ttps://onlinecourses.swayam2.ac.in/cec20\_mg01/preview](https://onlinecourses.swayam2.ac.in/cec20_mg01/preview) | | | | | | | | | | | | | |
| 4 | | | <https://www.coursera.org/courses?query=fashion%20design> | | | | | | | | | | | | | |
| 5 | | | <https://onlinecourses.swayam2.ac.in/cec20_mg19/preview> | | | | | | | | | | | | | |
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| **Course Designed By:** Dr.M.Sumithra | | | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | S | S | S |
| **CO2** | S | S | S | M | S | S | S | S | M | S |
| **CO3** | S | S | S | S | S | S | M | S | S | S |
| **CO4** | S | S | M | S | S | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S | M | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **1EC** | **TEXTILE BIOTECHNOLOGY** | **L** | | | **T** | | **P** | | **C** |
| **Elective** | | | | | 4 | | | - | | - | | 4 |
| **Pre-requisite** | | | | | Any science degree | **Syllabus Version** | | | | 2025 – 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. To know about the enzymes suitable for textile industry 2. To learn about the microbes in textile technology 3. To learn about the Bio-processing of Textiles 4. To learn about the manufacturing of Bio-functional Textiles 5. To know about the Biotechnology Application in Textile Industry | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | | Understand the industrially important enzymes for processing the textiles | | | | | | | | | | K2 | |
| 2 | | Understand the role of microbes in textile | | | | | | | | | | K2 | |
| 3 | | Apply suitable enzymes in Textile processing | | | | | | | | | | K3 | |
| 4 | | Create Bio-functional Textiles | | | | | | | | | | K6 | |
| 5 | | Understand Biotechnology Application in Textile Industry | | | | | | | | | | K2 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | | |
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| **Unit:1** | | | | **Enzymes in Textiles** | | | | **12 hours** | | | | | |
| Enzymes – General Terminology, Nomenclature and Classification; Enzymes in Textile industry – Amylases, Cellulases, Pectinases, Catalases, Proteases; Enzymes in treatment of textile dye effluent – Lignin peroxidases and Manganese peroxidases in degradation of azo dyes; Enzyme Engineering – Site-directed mutagenesis and Directed Evolution; Production of industrially important enzymes –Amylases, Cellulases, Lipases, Proteases: Subtilisin; Extraction of enzymes – soluble and membrane-bound. Purification of enzymes; Quantification of enzymes – colorimetric, spectrophotometric and spectrofluorometric assays; Biological assays. | | | | | | | | | | | | | |
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| **Unit:2** | | | | **Microbes in Textiles** | | | **12 hours** | | | | | | |
| Microorganisms in textile industry –Bacteria (*Bacillus*), Yeast (*Saccharomyces*) and Fungi (*Aspergillus*); Methods of culturing microorganisms – Culture media types, Isolation of pure cultures. Nutritional types of microorganisms. Fermentation media – Formulation – Carbon, Nitrogen sources, Minerals, Growth factors, Antibiotics and Antifoams; Microbial growth–Batch, Continuous, Fed-batch cultures, Growth Curve, Measurement of microbial growth. Growth control–Physical Methods, Chemical agents; Downstream processing– Precipitation, Filtration, Centrifugation, Cell disruption, Chromatography – Adsorption, Ion-exchange, Gel permeation, Affinity, Reverse phase and HPLC. | | | | | | | | | | | | | |
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| **Unit:3** | | | | **Bio-processing of Textiles** | | **12 hours** | | | | | | | |
| Isolation of enzymes; Application of enzymes in Textile processing – Bio scouring, Bio desizing, Bio bleaching, Bio degumming, Bio stiffening, Denim fading; Special finishes: Nano particle preparation and micro encapsulation of bio/natural extractions for anti bacterial, anti fungal, fragrance finish.; Methods of Finishing: Dip and dry, pad dry cure, plasma treatment, ultrasonic atomizer. | | | | | | | | | | | | | |
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| **Unit:4** | | | | **Bio-functional Textiles** | | **12 hours** | | | | | | | |
| Introduction, types, manufacturing and applications of bio-functional textiles; Electro spun nanofibers as Bio-medical devices; Evaluation of bio-functional effects and safety, future trends. | | | | | | | | | | | | | |
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| **Unit:5** | | | | **Biotechnology Application in Textile Industry** | | **10 hours** | | | | | | | |
| Natural fibres: Transgenic cotton, wool, DNA profiling of animal hair fibres; Novel fibres: Protein polymers, spider silk, other new fibre sources: chitins and chitosan, bacterial cellulose, corn fibre, polyester fibres; Biofabrics: Dyes and intermediates from micro-organisms: Naphthoquinone dye, anthroquinones, indigo; Treatment of textile waste water: Bioremediation – Bacteria (*Bacillus*, *Staphylococcus*, *Pseudomonas* and other bacteria), Yeast (*Saccharomyces*, *Candida*), Fungi (*Aspergillus*, *Trichosporon*, *Galactomyces*) and Microalgae (*Chlorella*, *Spirogyra*) for decolouration, metal and toxin removal. | | | | | | | | | | | | | |
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| **Unit:6** | | | | **Contemporary Issues** | | **02 hours** | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | **60 hours** | | | | | | | |
| **Reference Books/Articles:** | | | | | | | | | | | | | |
| 1 | | | Advances in textile biotechnology Nierstrasz, V., &Cavaco-Paulo, A. (Eds.) Elsevier,2010. | | | | | | | | | | |
| 2 | | | Enzymes, Bio chemistry, Biotechnology Clinical Chemistry, Trever Palmer. Affliated East - West Press Ltd, New Delhi, 2004. | | | | | | | | | | |
| 3 | | | Principles of fermentation technology. Stanbury, P. F., Whitaker, A., & Hall, S. J. Third Edition. Elsevier, 2017. | | | | | | | | | | |
| 4 | | | Principles of fermentation technology, Stanbury, P. F., Whitaker, A., & Hall, S. J, Second Edition. Elsevier, 2003. | | | | | | | | | | |
| 5 | | | Lehninger principles of biochemistry , Nelson, D. L., Lehninger, A. L., & Cox, M. M. Macmillan, 2008 . | | | | | | | | | | |
| 6 | | | Biochemistry , U. Satyanarayana and U. Chakrapani, ArunabhaSen Books and Allied P Ltd, Kolkata, Third Edition, 2006. | | | | | | | | | | |
| 7 | | | Textile processing with enzymes, Cavaco-Paulo, A., & Gubitz, G. (Eds.), Elsevier. 2003. | | | | | | | | | | |
| 8 | | | Application of enzymes in the textile industry: a review, Mojsov, K., 2011. | | | | | | | | | | |
| 9 | | | Microbiology, Prescott, L. M., Harley, J. P., & Klein, D. A., 5th International Edition, 2002. | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | |
| 1 | <http://nopr.niscair.res.in/bitstream/123456789/24929/1/IJFTR%2026%281-2%29%20202-205.pdf> | | | | | | | | | | | | |
| 2 | http://nopr.niscair.res.in/bitstream/123456789/11382/1/IJMS%2040%281%29%20130-133.pdf | | | | | | | | | | | | |
| 3 | <http://content.inflibnet.ac.in/data-server/eacharya-documents/53e0c6cbe413016f234436f5_INFIEP_17/31/ET/17-31-ET-V1-S1__l-31_theory_biological_assay_of_fermentation_products.pdf> | | | | | | | | | | | | |
| 4 | <http://nopr.niscair.res.in/bitstream/123456789/24631/1/IJFTR%2029%282%29%20239-259.pdf> | | | | | | | | | | | | |
| 5 | <http://nopr.niscair.res.in/bitstream/123456789/1290/1/JSIR%2066%288%29%20%282007%29%20611-614.pdf> | | | | | | | | | | | | |
| 6 | http://nopr.niscair.res.in/bitstream/123456789/44961/1/IJCT%2025%284%29%20315-323.pdf | | | | | | | | | | | | |
| 7 | <http://nopr.niscair.res.in/bitstream/123456789/11324/1/IJBT%202%283%29%20382-386.pdf> | | | | | | | | | | | | |
| 8 | <http://nopr.niscair.res.in/bitstream/123456789/24930/1/IJFTR%2026%281-2%29%20206-213.pdf> | | | | | | | | | | | | |
| 9 | <https://advances.sciencemag.org/content/3/5/e1601984.full> | | | | | | | | | | | | |
| 10 | <https://upcommons.upc.edu/bitstream/2117/131927/1/biofunctional-textiles.pdf> | | | | | | | | | | | | |
| 11 | <https://www.frontiersin.org/articles/10.3389/fmicb.2016.02087/full> | | | | | | | | | | | | |
| 12 | <http://nopr.niscair.res.in/bitstream/123456789/24930/1/IJFTR%2026%281-2%29%20206-213.pdf> | | | | | | | | | | | | |
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| **Course Designed By:** Dr.K.Sangeetha | | | | | | | | | | | | | |
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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | L | L | L | L | L | S | L | L | L |
| **CO2** | S | L | L | L | L | L | S | L | L | L |
| **CO3** | L | S | S | L | M | S | S | L | L | S |
| **CO4** | L | S | S | M | S | S | S | L | L | S |
| **CO5** | S | L | L | L | S | M | S | L | L | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | | **1ED** | **TECHNICAL TEXTILES - 1** | **L** | | | **T** | | **P** | | **C** |
| **Elective** | | | | | | 4 | | | - | | - | | 4 |
| **Pre-requisite** | | | | | | Basic knowledge about Textile science | **Syllabus Version** | | | | 2025 – 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about the production methods used for the Technical Textiles. 2. Learn in detail about the functions and properties of Technical Textiles. 3. Learn about the applications and latest developments in Technical Textiles. | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | Understand about agrotextiles for various applications | | | | | | | | | | | K2 | |
| 2 | | Understand about building textiles for various applications | | | | | | | | | | | K2 | |
| 3 | | Understand about cloth textiles for various applications | | | | | | | | | | | K2 | |
| 4 | | Understand about geo textiles for various applications | | | | | | | | | | | K2 | |
| 5 | | Design technical textile products for various applications | | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | | | |
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| **Unit:1** | | | | | **Agrotech** | | | | **12 hours** | | | | | |
| **Agro Textiles:** Introduction, fibers used, Types, production methods, functions and properties, Characteristics and Applications in Agro products and in its field. Latest developments in Agro Textiles. | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Buildtech** | | | **12 hours** | | | | | | |
| **Build Tech:** Introduction, fibers used, Types, production methods, functions and properties, Characteristics and Applications in Architecture and in Building Construction. Recent Advancement in Build Tech.  Applications and latest trends in its field. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Clothtech** | | **12 hours** | | | | | | | |
| **Clothtech:** Introduction, fibers used, Types, production methods, functions and properties, Characteristics and Applications – Sewing threads, interlinings, umbrella cloth, narrow fabrics, zip fasteners. | | | | | | | | | | | | | | |
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| **Unit:4** | | | | |  | | **12 hours** | | | | | | | |
| **Geo textiles: -** Introduction, fibers used, Types, production methods, functions and properties, Characteristics and Applications in its field. Recent developments in Geo Textiles. | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Product Development** | | **12 hours** | | | | | | | |
| Product development in Agrotech / Buildtech / Clothtech / Geotech. | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | **02 hours** | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | **60 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1. 1 | | | Hand book of Technical textiles, A. R. Horrocks and S. C. Anand, Wood head publishing ltd, England, 2000 | | | | | | | | | | | |
| 1. 2 | | | Technical Textiles and its Application , Dr.S.Grace Annapoorani, LASER Park Publishing House, India, 2017 | | | | | | | | | | | |
| 1. 3 | | | Textiles for Industrial Applications, R Senthil Kumar, CRC Press, 2013 | | | | | | | | | | | |
| **Reference Books/Articles:** | | | | | | | | | | | | | | |
| 1. 5 | | | | Textile Fibers: Developments and Innovations, Kothari, V., New Delhi: IAFL Publications, 2000. | | | | | | | | | | | |
| 1. 6 | | | | Handbook of Industrial Textiles, Sabit Adanur, Wellington Sears CRC Press ,1995 | | | | | | | | | | | |
| 1. 7 | | | | Agro Textiles and its Application, Dr.S.Grace Annapoorani, Wood head publishing ltd, India , 2018 | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.** | | | | | | | | | | | | | | |
| 1. 1 | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/130> | | | | | | | | | | | | | |
| 1. 2 | https://www.textile Learner blogspot.con | | | | | | | | | | | | | |
| 1. 3 | <https://textilelearner.blogspot.com/2020/03/nfc-embedded-smart-textiles.html> | | | | | | | | | | | | | |
| 1. 4 | <https://www.technical-textiles.net> | | | | | | | | | | | | | |
| 1. 5 | <https://www.sciencedirect.com/topics/materials-science/smart-textiles> | | | | | | | | | | | | | |
| **Course Designed By: Dr. K. Sangeetha** | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | S | L | S |
| **CO2** | S | S | S | S | M | S | S | S | L | S |
| **CO3** | S | S | S | M | S | S | S | S | L | S |
| **CO4** | S | M | S | M | M | S | S | S | M | S |
| **CO5** | S | M | S | S | S | S | S | S | M | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **13P** | **APPAREL COMPUTER AIDED DESIGNING** | **L** | **T** | **P** | | | **C** |
| **Core - Practical** | | | | | - | - | 3 | | | 3 |
| **Pre-requisite** | | | | | Basic knowledge about fashion designing using CAD | **Syllabus Version** | | 2025 -2026 | | | |
| **Course Objectives:** | | | | | | | | | | | |
| The main objectives of this course are to:   1. Illustrate various garment design for various seasons 2. Illustrate various garment design for various occasions 3. Illustrate various garment design using CAD 4. Preparing specification sheet using CAD 5. Work on individual projects as well as set practical and experimental exercise | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | |
| 1 | | | Apply garment designing by illustration manually | | | | | | K3 | | |
| 2 | | | Analyze the designing based on a theme | | | | | | K4 | | |
| 3 | | | Evaluate the designed garment by selected inspiration | | | | | | K5 | | |
| 4 | | | Create the illustration using CAD software | | | | | | K6 | | |
| 5 | | | Create specification sheet for the designed garments | | | | | | K6 | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | |
| **Apparel Computer Aided Designing** | | | | | | | | | | **75 hours** | |
| 1. To design garments according to selected theme and inspiration. 2. Fashion illustration by hand and Apparel CAD Software for various seasons and occasions (Men, Women/Children). 3. To draft patterns for the designed garments (Men, Women/children). 4. To draft pattern of the designed garments and Pattern layout using Textile CAD software. 5. To develop the grading and marker efficiency of the drafted patterns. 6. Preparing the specification sheet using CAD for industrial production. 7. Designing fabrics for Plain, Rib, Twill, Satin and Sateen Weaves. 8. To create the Dobby and Jacquard Weave using Textile CAD software. 9. To implement the created Weave patterns in home textiles and fashion garments using 3D. | | | | | | | | | | | |
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| **Total hours** | | | | | | | | | | **75 hours** | |
| **Text Books** | | | | | | | | | | | |
| 1 | Basics Textile Design 01: Sourcing Ideas: Researching Colour, Surface, Structure, Texture and Pattern Paperback ,[Josephine Steed](https://www.amazon.com/Josephine-Steed/e/B00A01FC9I/ref=dp_byline_cont_book_1), [Frances Stevenson](https://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Frances+Stevenson&text=Frances+Stevenson&sort=relevancerank&search-alias=books), 2012 | | | | | | | | | | |
| 2 | Print, Make, Wear: Creative Projects for Digital Textile Design Paperback, [The People's Print](https://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=The+People%27s+Print&text=The+People%27s+Print&sort=relevancerank&search-alias=books), by [Melanie Bowles](https://www.amazon.com/Melanie-Bowles/e/B008HSWAH8/ref=dp_byline_cont_book_1), 2015. | | | | | | | | | | |
| 3 | CAD in Clothing and Textiles Paperback – Import, [Winifred Aldrich](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Winifred+Aldrich&search-alias=stripbooks), 1994 | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | |
| 1 | Digital Textile Design, Second edition Paperback ,[Melanie Bowles](https://www.amazon.in/Melanie-Bowles/e/B008HSWAH8/ref=dp_byline_cont_book_1), [Ceri Isaac](https://www.amazon.in/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Ceri+Isaac&search-alias=stripbooks) Illustrated, 2012 | | | | | | | | | | |
| 2 | Digital Textile Design: Portfolio Skills (Portfolio Skills: Fashion & Textiles)**,**[Melanie Bowles](https://www.amazon.com/Melanie-Bowles/e/B00404H9LA/ref=dp_byline_cont_book_1), [Ceri Isaac](https://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&field-author=Ceri+Isaac&text=Ceri+Isaac&sort=relevancerank&search-alias=books), 2009 | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | |
| 1 | | <https://www.coursera.org/courses?query=cad> | | | | | | | | | |
| 2 | | <https://onlinecourses.swayam2.ac.in/nou20_cs15/preview> | | | | | | | | | |
| 3 | | <https://learning.naukri.com/textile-design-courses-certification-training-by-coursera-st369-tg361-5> | | | | | | | | | |
| 4 | | <https://www.compufield.com/high_res_textile_designing_sample9.html> | | | | | | | | | |
| 5 | | <https://www.slideshare.net/BusinessVibes_Network/textile-webinar> | | | | | | | | | |
| 6 | | <https://www.cita.org.hk/en/event/free-webinar-on-how-to-present-the-3d-garment/> | | | | | | | | | |
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| **Course Designed By**: Dr.M.Jayakumari | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | M | S | S | S | S | S | S | S |
| **CO2** | S | S | S | S | S | S | S | S | S | S |
| **CO3** | S | S | S | S | S | S | S | S | S | S |
| **CO4** | M | M | M | S | S | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **13Q** | **FABRIC FORMATION TECHNIQUES** | **L** | | **T** | **P** | | | **C** |
| **Core - Practical** | | | | | - | | - | 4 | | | 4 |
| **Pre-requisite** | | | | | Basic knowledge about textile fabrics and the formation techniques. | **Syllabus Version** | | | 2025 – 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Understand the different fabric formation techniques. 2. Understand the basic stitches and patterns of fabric formation. 3. Make different fabric structures. | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | | | Apply fabric formation skills for design development. | | | | | | | | K3 | |
| 2 | | | Creation of fabric structures by weaving, knitting and tatting. | | | | | | | | K6 | |
| 3 | | | Creation of fabric structures by crocheting and braiding. | | | | | | | | K6 | |
| 4 | | | Creation of fabric structures by macramé and flocking. | | | | | | | | K3 | |
| 5 | | | Evaluate the different fabric structures. | | | | | | | | K5 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | |
| **Fabric formation techniques** | | | | | | | | | | **75 hours** | | |
| 1. Weaving    1. Plain    2. Twill    3. Satin    4. Sateen 2. Knitting    1. Knit stitch    2. Netted stitch    3. Single rib knit 3. Tatting    1. Needle tatting 4. Crocheting    1. Single crochet    2. Double crochet    3. Treble crochet 5. Braiding    1. Regular    2. Diamond    3. Hercules 6. Macramé    1. Single cord braid  Three-strand braidFour-strand braid  1. Flocking | | | | | | | | | | | | |
| **Total hours** | | | | | | | **75 hours** | | | | | |
| **Text Book** | | | | | | | | | | | | |
| 1 | Principles of Fabric Formation, Prabir Kumar Banerjee, Taylor & Francis, 2014. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Reference Book** | | | | | | | | | | | | |
| 1 | Weaving for Beginners: An Illustrated Guide: 3rd Ed, Peggy Osterkamp, Lease Sticks Press, 2020. | | | | | | | | | | | |
| 2 | My First Knitting Book, Hildegarde Deuzo, Dover Publications, 2016. | | | | | | | | | | | |
| 3 | Crochet: A Beginners Guide to Crochet, Nancy Ross, PublishDrive, 2018. | | | | | | | | | | | |
| 4 | New Tatting: Modern Lace Motifs and Projects, Tomoko Morimoto, Interweave Press, 2014. | | | | | | | | | | | |
| 5 | Braiding and Knotting: Techniques and Projects, Constantine A. Belash, Dover Publications, 2013. | | | | | | | | | | | |
| 6 | Mixed Fiber Macramé, Chantel Conlon, Page Street Publishing, 2020. | | | | | | | | | | | |
| 7 | Chapter 12 Flocked fabrics and structures in Specialist Yarn and Fabric Structures: Developments and Applications, Y. K. Kim, Woodhead Publishing, 2011. | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | |
| 1 | | <https://www.youtube.com/@tabbyandtweed/featured> | | | | | | | | | | |
| 2 | | <https://www.youtube.com/@KiranTheKnitter/featured> | | | | | | | | | | |
| 3 | | <https://www.youtube.com/@bellacococrochet/featured> | | | | | | | | | | |
| 4 | | <https://www.youtube.com/@RustiKate/featured> | | | | | | | | | | |
| 5 | | <https://www.youtube.com/watch?v=x9LxFmOZNls> | | | | | | | | | | |
| 6 | | <https://www.youtube.com/@SashaMACRAMESSAGE> | | | | | | | | | | |
| 7 | | <https://www.youtube.com/playlist?list=PLxYgyrSBjon0Iz6as7sQiDv_KKzfqB3bf> | | | | | | | | | | |
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| **Course Designed By:** Dr. K. Amutha | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | L | M | M | L | M | S | S |
| **CO2** | S | S | S | L | M | M | L | M | S | S |
| **CO3** | S | S | S | M | L | M | M | M | S | S |
| **CO4** | S | S | S | L | L | M | L | M | S | S |
| **CO5** | S | S | M | L | L | M | L | M | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **GS88** | | **CLOTHING CARE** | **L** | | | | **T** | **P** | **C** |
| **Supportive** | | | | | | 2 | | | | - | - | 2 |
| **Pre-requisite** | | | | | | **Any UG Degree** | **Syllabus Version** | | | | 2025 – 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | |
| The main objectives of this course are to:  1.To Learn about classification of Textile Fibers and their characteristics  2.To learn about wardrobe planning  3. Different types of washing care for the various materials  4.Stain removal and its classification  5. Requirement for the care labeling system | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | | | Remember about Textile Fibers and their characteristics | | | | | | | | | K1 | |
| 2 | | | Understand about wardrobe planning | | | | | | | | | K2 | |
| 3 | | | Select care Labelling system and its uses | | | | | | | | | K3 | |
| 4 | | | Classify stain removal and principles | | | | | | | | | K4 | |
| 5 | | | Evaluate Care Labels | | | | | | | | | K5 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Unit:1** | | | | | **Textile Fibers** | | | | | | **5 hours** | | |
| **Textile Fibers:** Introduction, Classification, General care of different fibers – Cotton, linen, wool, silk, nylon, polyester, acrylics, rayon, acetate | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Unit:2** | | | | | **Wardrobe** | | | | | **5 hours** | | | |
| **Wardrobe -** Definition and wardrobe planning. Clothing Selection **-** Factors to be considered for clothing selection. | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Laundering** | | | | **6 hours** | | | | |
| **Laundering:** Water, detergents, laundry equipments – Household and commercial, laundry procedure for various fiber fabrics – Cotton and linen, woolens, silk and synthetics.  **Dry Cleaning:** Definition, dry-cleaning operations and materials. | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Stain Removal** | | | | **6 hours** | | | | |
| **Stain Removal:** Identification and classification of stains, general procedures of stain removal, principles of stain removal, classification of stain removers. | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Unit:5** | | | | | **Care Labels** | | | **6 hours** | | | | | |
| **Care Labels:** Various systems of care labelling, washing, bleaching, drying, ironing, and dry- cleaning instructions. Placement of labels on garments. | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **02 hours** | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | | **30 hours** | | | | | |
| **Text Books** | | | | | | | | | | | | | |
| 1 | Care and Maintenance of Textile Products Including Apparel and Protective Clothing, Rajikishore Nayak and Saminathan Ratnapandian,CRP press,2018. | | | | | | | | | | | | |
| 2 | Fabric Care**,** [D. Noemia Souza](https://www.google.co.in/search?tbo=p&amp%3Bamp%3Btbm=bks&amp%3Bamp%3Bq=inauthor%3A%22D.%2BNoemia%2BSouza%22), NewAgeInternational,1998. | | | | | | | | | | | | |
| 3 | Fundamentals of Textiles and their Care, Susheela Dantygai , Orient Longmann,1980. | | | | | | | | | | | | |
| 4 | Family Clothing -Tate of Glession, John Wiley & Sons I n c, Illinois,1996. | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | |
| 1 | Household Textiles and Laundry Work,– Durga Duelkar, Amla ram & Sons,2001 | | | | | | | | | | | | |
| 2 | Textiles fabrics and their Selection, Wingate I B, Prentice-Hall, Inc, 1946. | | | | | | | | | | | | |
| 3 | Science in clothing comfort, Apurba das and R.Alagirusamy,woodhead,2010. | | | | | | | | | | | | |
| 4 | Clothing Care Manual, [Isabel Makwara Mupfumira](https://www.google.co.in/search?tbo=p&amp%3Bamp%3Btbm=bks&amp%3Bamp%3Bq=inauthor%3A%22Isabel%2BMakwara%2BMupfumira%22), [NyaradzoJinga](https://www.google.co.in/search?tbo=p&amp%3Bamp%3Btbm=bks&amp%3Bamp%3Bq=inauthor%3A%22Nyaradzo%2BJinga%22), Strategic Book,2014. | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | |
| 1 | | <https://syam-uat-node2.appspot.com/cec_practicecourse33/preview> | | | | | | | | | | | |
| 2 | | <https://www.classcentral.com/course/swayam-textile-study-4327ttps://www.vuframe.com/industries/fashion/> | | | | | | | | | | | |
| 3 | | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/130><https://www.coatsrmation-Hub/Care-Labels#The_International_Care_Labelling_System> | | | | | | | | | | | |
| 4 | | <https://www.youtube.com/watch?v=gUk7h3nQ4KY> | | | | | | | | | | | |
| 5 | | <http://www.ctc-phaseout.com/Stain-Removal-TA.pdf> | | | | | | | | | | | |
| 6 | | <https://sewguide.com/fabric-care-symbols/> | | | | | | | | | | | |
| **Course Designed By:** Dr.M.Sumithra | | | | | | | | | | | | | |

**JOB ORIENTED CERTIFICATE COURSE**

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| **1. Fashion Designer (AMH/Q1201), NSQF Level 5** | | | | | | | |
| **Name of the Department** | | | | | | Textiles and Apparel Design | |
| **Name of the Faculty Member i/c**  **With Complete Address with Phone and e-mail** | | | | | | **Dr. K. Amutha,**  Assistant Professor, Dept. of Textiles and Apparel Design, Bharathiar University, Coimbatore – 46  Email: [amuthatad@buc.edu.in](mailto:amuthatad@buc.edu.in)  Mb: 9159440734 | |
| **Inter / Intra Department Course** | | | | | | Inter/Intra Department Course | |
| **Duration of the Course** | | | | | | 60 hours | |
| **Eligibility** | | | | | | 12th Standard | |
| **Number of Candidates to be Admitted** | | | | | | 25 | |
| **Mode of the Course** | | | | | | Regular | |
| **Collaboration with Company**  (if Yes, Full Address of the Company Address , Name of the Contact Person, Phone, e-mail etc.) | | | | | | K.P.R Mill Limited 'Corporate Office', Shrivari Srimat, 1045, Avinashi Road, Coimbatore - 641 018 Phone : 0422-2207777 (50 lines) Fax : 0422 – 2207778 | |
| **Registration Procedure** | | | | | |  | |
| **Job Opportunities:** Designer in apparel industry, freelance designer, fashion boutique. | | | | | | | |
| **The objectives of the Course are:** | | | | | | | |
| The main objectives of this course are to: | | | | | | | |
| 1 | | | Learn fashion designing concepts. | | | | |
| 2 | | | Understand elements of fashion. | | | | |
| 3 | | | Develop new designs. | | | | |
| 4 | | | Understand and implement the design development process. | | | | |
| 5 | | | Follow the national and international requirements in designing. | | | | |
| **Course Content** | | | | | Lecture & Internship | | |
|  | | | | | | | |
| **Module 1** | | | | Fashion design research & Determine key criteria for design brief-key criteria for design brief. (theory) | | | **4 hours** |
| **Module 2** | | | | Internship | | | **8 hours** |
| **Module 3** | | | | Confirm design-Specify design-Implement design. (theory) | | | **4 hours** |
| **Module 4** | | | | Internship | | | **8 hours** |
| **Module 5** | | | | Design development process-design development process. (theory) | | | **4 hours** |
| **Module 6** | | | | Internship | | | **8 hours** |
| **Module 7** | | | | Theworkarea, tools and machines and computers. (theory) | | | **4 hours** |
| **Module 8** | | | | Internship | | | **8 hours** |
| **Module 9** | | | | Health, safety and security requirements at work. (theory) | | | **4 hours** |
| **Module 10** | | | | Internship | | | **8 hours** |
|  | | | |  | | |  |
| **Books** | | | | | | | |
| 1 | Fashion Design Course, Steven Faerm, Barron’s, 2010. | | | | | | |
| 2 | Fashion Design Essentials, Jay Calderin, Rockport Publishers, 2012. | | | | | | |
|  | | | | | | | |
| **References** | | | | | | | |
| 1 | How to be a Fashion Designer, Lesley Ware, Tiki Papier, Dorling Kindersley Limited, 2018. | | | | | | |
| 2 | The Fundamentals of Fashion Design, Richard Sorger, Jenny Udale, AVA Publishing, 2006. | | | | | | |
| **Related Online Contents** | | | | | | | |
| 1 | | <https://www.coursera.org/learn/fashion-design> | | | | | |
| 2 | | <https://www.edx.org/professional-certificate/hkpolyux-fashion-design-and-creation> | | | | | |
| 3 | | <https://www.oxfordhomestudy.com/courses/fashion-courses-online/fashion-designing-online-courses-free> | | | | | |
| 4 | | <https://www.arts.ac.uk/subjects/fashion-business/short-courses/fashion-management/fashion-trend-forecasting-online-short-course-lcf> | | | | | |
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**SEMESTER II**

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| **Course code** | | | | **23A** | | **ADVANCED TEXTILE PROCESSING** | **L** | | | **T** | | | **P** | **C** |
| **Core** | | | | | | **4** | | | **-** | | | **-** | **4** |
| **Pre-requisite** | | | | | | Basic knowledge about Textile Processing | **Syllabus Version** | | | | 2025 - 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about the pre and post dyeing wet processing with recent developments. 2. Learn about Textiles dyes and chemicals. 3. Learn about Textile printing and its fixation 4. Learn about Textile finishing and its applications in Textile Industry. 5. Learn about the Bio technology and Effluent Treatment plants | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | | Apply the pre and post dyeing wet processing in industry | | | | | | | | | K3 | | |
| 2 | | | Apply the types of Textile dyes and its Classification and chemicals. | | | | | | | | | K3 | | |
| 3 | | | Create and analyze the Textile printing and its methods and classifications. | | | | | | | | | K3 & K6 | | |
| 4 | | | Evaluate the process of Textile finishing, classification and its applications using enzymes | | | | | | | | | K4 & K5 | | |
| 5 | | | Evaluate and explore the techniques of Bio technology and Effluent Treatment plants | | | | | | | | | K5 | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:1** | | | | | **Preparatory Process** | | | | **11 hours** | | | | | |
| Introduction, Fiber – Composition - Typical Sequence of Processes - General Wet Processing Sequence for Cotton, Silk, Wool - Pre-Dyeing preparatory Processing - Desizing Starch - Scouring – Bleaching – Mercerising, Washing, Drying. | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Dyeing** | | | | **12 hours** | | | | | |
| Classification of Dyes - Dyeing Machines, Influence of Physical and Chemical Structure of Fibers on Dyeability - Types of Dyeing Machine, Jet, HT, Beam Dyeing Machine, Padding Mangle, and Jigger - Recent developments in dyeing, waterless dyeing Enzymes used for dyeing. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Printing** | | | | **12 hours** | | | | | |
| Styles of Printing - Methods of Printing, Block, Flat, Rotary Screen, engraved Roller, Transfer, Duplex printing, Pigment Printing, Batik, Khadi - Fixation and After Treatment - Print Paste Formulation, digital printing, 3D printing. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:4** | | | | | **Finishing** | | | | **12 hours** | | | | | |
| Necessity for Finishing – Commercial importance of finishing - Mechanical finishes, heat setting, anti shrink, calendaring - Finishing chemicals – Resin finishing, Flame proof & flame retardancy, Soil Release Finish, Foam Finish, Water proof & Repellent, anti odour, Micro encapsulation techniques in finishing process.  **Enzymes** – Sources and Applications - Application of enzymes in Textile Chemical Processing - Mechanism of enzyme reactions – Bioscouring - Bio- bleaching, Combined bio - processing, bio washing, bio polishing, Denim fading, and anti microbial finishes, bio finishing and other applications - Evaluation of enzyme treated fabrics | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:5** | | | | | **Textile Effluent Treatment** | | | **11 hours** | | | | | | |
| Characteristic of textile effluent, Developments in membrane techniques in the effluent treatment - Energy conservation steps in chemical processing - Low wet pick-up techniques - Causes and remedies for water and air pollution – Bio-Technology in textile effluent treatment plants. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:6** | | | | | **Contemporary Issues** | | | **02 hours** | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | | **60 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Dyeing and Chemical Technology of Textile Fibers, Trotman, E.R., Charles Griffin & Co. Ltd., U. K., 1984. | | | | | | | | | | | | | |
| 2 | Wet Processing Machineries, R.S.Bhagwat, Mahajan Publications, 2000. | | | | | | | | | | | | | |
| 3 | Technology of Dyeing, Shenai.V.A, Sevak publications, Mumbai, 1995 | | | | | | | | | | | | | |
| 4 | Textile Printing, Miles. L.W.C, SDC, England, ISBN: 0901956570,1994, | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | Treatment of Textile Processing Effluents, Manivasakam, N, Sakthi Publication, Coimbatore,1995 | | | | | | | | | | | | | |
| 2 | Chemical Processing of Synthetic Fibers and Blends, DatyeK.VandVaidya.A.A, JohnWiley and Sons, NewYork,1984 | | | | | | | | | | | | | |
| 3 | Finishing of Garments and Knits, NCUTE – Programme series held at Ichalkaranchi, IIT, Delhi,2003. | | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <https://swayam.gov.in/nd1_noc20_te09/preview> | | | | | | | | | | | | |
| 2 | | <https://swayam.gov.in/nd1_noc20_te02/preview> | | | | | | | | | | | | |
| 3 | | <https://www.classcentral.com/course/swayam-textile-finishing-14326> | | | | | | | | | | | | |
| 4 | | <https://swayam.gov.in/nd1_noc19_ce32/preview> | | | | | | | | | | | | |
| 5 | | <https://www.cottonworks.com/upcoming-webinar-advances-in-sustainable-dyeing/> | | | | | | | | | | | | |
| 6 | | <https://www.pall.co.in/en/microelectronics/webinars/wpci2017.html> | | | | | | | | | | | | |
| 7 | | <https://www.aatcc.org/events/online/webinars/page/2/> | | | | | | | | | | | | |
| 8 | | <https://www.slideshare.net/MushfiqueSakif/difference-between-garments-dyeing-fabric-dyeing> | | | | | | | | | | | | |
| 9 | | <https://www.slideshare.net/nishohel/wet-processing-23961418> | | | | | | | | | | | | |
| 10 | | <https://www.slideshare.net/sheshir/new-microsoft-office-power-point-presentation-copy-2-32667173> | | | | | | | | | | | | |
| 11 | | <https://knittingviewsbd.com/everlight-seminar-offers-sustainable-solution-for-textile-wet-processing-industry/> | | | | | | | | | | | | |
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| **Course Designed By:**Dr.M.Jayakumari | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | M | S | S | M | S | M | S | M | S |
| **CO3** | S | M | S | L | M | S | M | S | M | S |
| **CO3** | S | M | S | S | M | S | M | S | M | S |
| **CO4** | S | M | L | S | M | S | M | S | M | S |
| **CO5** | S | M | S | S | M | S | M | S | M | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **23B** | | **RESEARCH METHODOLOGY AND STATISTICS** | **L** | | | | **T** | | **P** | **C** |
| **Core** | | | | | | 4 | | | | - | | - | 4 |
| **Pre-requisite** | | | | | | Any UG Degree | **Syllabus Version** | | | | | 2025-2026 | | |
| **Course Objectives** | | | | | | | | | | | | | | |
| The main objectives of this course are to:  1. Give an overview of the research methodology and explain the technique of defining a research problem  2. Organize scientific investigation to solve problem, test hypotheses, develop or invent new products.  3. Explain the art of interpretation and the art of writing research reports. | | | | | | | | | | | | | | |
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| **Expected Course Outcomes** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | Know about Research, types and concepts and developing a Research Plan related to Textile Industry. | | | | | | | | | | | | | K1 |
| 2 | Understand range of quantitative and / or qualitative research techniques to textile related business management and environmental problems. | | | | | | | | | | | | | K2 |
| 3 | Apply and analyze sampling designs, measurement and scaling techniques and also about different methods of data collections. | | | | | | | | | | | | | K3 |
| 4 | Develop necessary critical thinking skills in order to evaluate different research  approaches utilized in the textile and its related industries. | | | | | | | | | | | | | K4 |
| 5 | Understand the Role of research Software’s in Research evaluation | | | | | | | | | | | | | K5 |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create | | | | | | | | | | | | | | |
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| **Unit:1** | | | | | **Introduction to Research** | | | | | | **08 hours** | | | |
| Meaning Of Research, Types of Research - Significance of Research - Research Process. Defining the Research Problem - Sources, Identification, Selection and Statement, Review of related literature | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Research Design** | | | | | **10 hours** | | | | |
| Research Design - Meaning, Types of research designs, Basic Principles of experimental designs. Developing a Research Plan related to Textile Industry.  Sampling and its Techniques, Steps in sampling design, criteria for selecting a sampling procedure, Characteristics of a good sample design. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Methods of Data Collection** | | | | **10 hours** | | | | | |
| Methods Of Data Collection **-** Observation, Questionnaire, Interview. Data Processing- Collection, Classification, Tabulation, Graphical Representation and Data Analysis. | | | | | | | | | | | | | | |
| **Unit:4** | | | | | **Research Report** | | | | **15 hours** | | | | | |
| Research Report - Format of research report, Main body of the report, References and appendices, Style of writing, Typing the Report, Pagination, Tables and Figures, Evaluating the report. Plagiarism check. | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Meaning and Scope of Statistics** | | | **15 hours** | | | | | | |
| Meaning and scope of statistics, common softwares used for statistical analysis and its applications, common software’s used for statistical analysis. Measures of central tendency and dispersion. Standard deviation, Correlation- Co-efficient of Correlation and its Interpretation, Rank Correlation, Regression equation, Application of Chi-Square test, ANOVA test. **(only theory, No problems for exam)** | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **02 hours** | | | | | | |
| 1. Expert lectures, online seminars – webinars 2. Activity – Prepare a Model Research Report for any interested topic. | | | | | | | | | | | | | | |
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| **Total Lecture hours** | | | | | | | | **60 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | | Research Methodology: Methods and Techniques, C.R. Kothari, Gaurav Garg, New Age International, 4th Edition, 2018 | | | | | | | | | | | | |
| 2 | | An Introduction to Statistical Methods, S P Gupta, Vikas Publishing House, New Delhi, 2009 | | | | | | | | | | | | |
| 3. | | Research in Education, Best J N, Prentice Hall, Delhi, 1979 | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | | |
| 1 | | Statistical method- An introductory text, J. Medho, New age International publishers, New Delhi, 2005 | | | | | | | | | | | | |
| 2 | | Introduction to Research in Education, Donald Ary, Lucy Cheser Jacobs , Wordsworth Pub Co, 8th edition, 2009 | | | | | | | | | | | | |
| 3 | | Handbook of Research Methodology A Compendium for Scholars & Researchers, Dr. Shanti Bhushan Mishra Dr.ShashiAlok, Educreation Publishing, 2011 | | | | | | | | | | | | |
| 4 | | Research Methodology: A Step by Step Guide for Beginners, Ranjit Kumar, SAGE Publications, 2014 | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1. | | | UGC MOOCs  <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_pg.php/838> | | | | | | | | | | | |
| 2 | | | Research Methodology, By Prof. G.S.Bajpa,  <https://www.classcentral.com/course/swayam-research-methodology-17760> | | | | | | | | | | | |
| 3 | | | Introduction to Research , By Prof. Prathap Haridoss | IIT Madras  <https://swayam.gov.in/nd1_noc19_ge21/preview> | | | | | | | | | | | |
| 4. | | | <https://www.classcentral.com/course/swayam-introduction-to-research-5221> | | | | | | | | | | | |
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| **Course Designed By:** Dr.S.Grace Annapoorani | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | M | M | S |
| **CO2** | M | S | S | S | S | S | S | M | M | M |
| **CO3** | S | S | S | S | S | S | S | M | M | M |
| **CO4** | M | S | S | M | M | S | S | S | S | M |
| **CO5** | M | L | L | S | S | M | L | L | L | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **23C** | | **TEXTILE AND APPAREL TESTING** | **L** | | | **T** | | | **P** | | **C** |
| **Core** | | | | | | 4 | | | - | | | - | | 4 |
| **Pre-requisite** | | | | | | Basic knowledge about textile materials and test parameters. | **Syllabus Version** | | | | | | 2025 – 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about the importance of textile testing and its role in quality control. 2. Demonstrate the testing methods and instruments for testing of textiles. 3. Learn about the national and international standards for textile testing. | | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | |
| 1 | | | Understand the importance of textile testing and its role in quality control. | | | | | | | | | | | K2 | |
| 2 | | | Apply various testing methods and instruments for testing of textiles. | | | | | | | | | | | K3 | |
| 3 | | | Understand the national and international standards for textile testing. | | | | | | | | | | | K2 | |
| 4 | | | Analyze the properties of textile materials by testing. | | | | | | | | | | | K4 | |
| 5 | | | Evaluate the quality of textile materials based on test results. | | | | | | | | | | | K5 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create | | | | | | | | | | | | | | | |
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| **Unit:1** | | | | | **Introduction to Textile Testing** | | | | | | | **12 hours** | | | |
| Textile testing – definition – objectives; Types – destructive and non-destructive. Selection of samples for testing: fiber - zoning, core sampling, random draw and cut square methods, yarn – random sampling and fabric sampling. Standard atmosphere for testing - Measurement of Moisture regain - Conditioning oven & Shirley Moisture meter. Preparation of samples for testing: conditioning and pre-conditioning.  Sources of textile testing standards: ISO, BIS, BSI, AATCC, ASTM, ANSI. | | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Fiber Testing** | | | | | | **12 hours** | | | | |
| **Conventional Testing methods**: Cotton fiber length - Baer Sorter, Fineness - Sheffield micronaire, Maturity - Caustic soda swelling, Strength - Pressley bundle strength tester and Stelometer. Determination of trash and lint in cotton - Shirley trash analyser.  **Computerized testing methods**: HVI, AFIS, Cottonscope, MDTA4 | | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Yarn Testing** | | | | **12 hours** | | | | | | |
| **Yarn numbering systems**: direct and indirect; Conversion of count from one system to another; Instruments for count determination – wrap reel and balance, quadrant balance, Beesley balance. **Yarn strength testing**: Principles of CRT, CRL, CRE – Single yarn strength tester – UT J, UT R, Lea strength tester.  **Yarn twist**: definition, direction of twist, twist multiplier, measurement of yarn twist.  **Yarn Evenness**: classification of variation, methods of measuring evenness, Uster evenness tester- UT6. **Yarn faults**: classification- Uster Classimat 5.  **Yarn hairiness**: S3 value, UHL400. | | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Fabric Testing-1** | | | | **12 hours** | | | | | | |
| **Physical Parameters**: Length, width, count (EPIxPPI), crimp, weight (GSM), cover factor, thickness, air and water permeability, Fabric dimensional stability to domestic washing and drying.  **Mechanical Parameters**: Tensile strength, tearing strength, bursting strength, peel bond strength.  **Handle and comfort parameters**: Fabric abrasion, pilling, drape, stiffness, crease resistance / crease recovery, sensory testing, thermo-physiological testing, thermal comfort, FTT - Fabric TouchTester, Kawabata Evaluation System. | | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Fabric Testing-2** | | | **10 hours** | | | | | | | |
| **Fabric flammability testing**: vertical and inclined plane.  **Colour fastness:** laundering**,** dry cleaning, crocking, perspiration, sunlight and hot pressing.  **Seam testing**: seam strength, seam slippage.  **Accessories Testing**: Zipper, Buttons, Sewing thread. | | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **02 hours** | | | | | | | |
| 1. Prepare a record of different fabric samples and analyze their comfort Properties. 2. Learn industry related terminologies. 3. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | | **60 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | | |
| 1 | A Practical Guide to Textile Testing, Amutha.K, CRC Press, 2016 | | | | | | | | | | | | | | |
| 2 | Textile Testing, Raul Jewel, APH Publishing Corporation,2005 | | | | | | | | | | | | | | |
| 3 | Advanced Textile Testing Techniques, Sheraz Ahmad et al., CRC Press, 2017. | | | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | | | |
| 1 | Fabric Testing, Ed. Jinlian Hu, Woodhead Publishing Ltd., 2008. | | | | | | | | | | | | | | |
| 2 | Principles of Textile Testing: An Introduction to Physical Methods of Testing Textile Fibers, Yarns and Fabrics, J.E.Books, Butter worths,1986 | | | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | |
| 1 | | [https://nptel.ac.in/courses/116/102/116102029/#](https://nptel.ac.in/courses/116/102/116102029/) | | | | | | | | | | | | | |
| 2 | | <https://nptel.ac.in/courses/116/102/116102049/> | | | | | | | | | | | | | |
| 3 | | <https://www.services.bis.gov.in:8071/php/BIS_2.0/dgdashboard/published/subcommtt?depid=NzE%3D> | | | | | | | | | | | | | |
| 4 | | <https://www.iso.org/committee/48148.html> | | | | | | | | | | | | | |
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| **Course Designed By:** Dr.K.Amutha | | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | L | M | L | S | M | L | S | S | S |
| **CO2** | S | S | S | S | S | L | M | S | S | S |
| **CO3** | S | S | S | M | S | L | S | S | S | S |
| **CO4** | S | S | S | S | S | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S | M | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **2EA** | | **HOME SCIENCE** | **L** | **T** | | | | **P** | | **C** |
| **Practical** | | | | | | 4 | - | | | | - | | 4 |
| **Pre-requisite** | | | | | | Any B.Sc. degree | **Syllabus Version** | | | | 2025 – 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   * Learn about the food service and safety standards & nutritional values. * Understanding the whole process of textiles from fibre to fabric & fashion. * Understanding the concepts of Resource Management & Interior Design. * Understanding the concept of human psychological development & family studies. * To learn about communication through educational practices & Extension management. | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, students will be able to: | | | | | | | | | | | | | | |
| 1 | | | Understand the food safety & standards, service, properties & nutritional diet management | | | | | | | | | | K2 | |
| 2 | | | Understand the manufacturing of fibre yarn & fabric, studying Fashion design, fashion cycle, and theories. | | | | | | | | | | K2 | |
| 3 | | | Create awareness on natural resource management & sustainable development. | | | | | | | | | | K6 | |
| 4 | | | Analyze the principles and theories of human development & family studies | | | | | | | | | | K4 | |
| 5 | | | Gain knowledge on communication systems & theories, ICT practices. | | | | | | | | | | K2 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | | | |
| **Unit:1** | | | | | **Food Science and Nutrition** | | | | | 1. **Hours** | | | | |
| **Food Science and Food Service Management**  Food science and Properties of food – physical and chemical properties, Quality evaluation of foods- objectives and Food pigments and Additives, Food standards, microbiological safety of food, HACCP, food  **Nutrition And Dietetics**  Food groups – balanced diet, food pyramid, macro and micro, Nutrients-role of nutrients in the body, nutrient deficiencies and requirements for Public health nutrition, Clinical and therapeutic, Diet Counselling and Management | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Textiles & Apparel Design** | | | | 1. **Ours** | | | | | |
| **Textiles**  Textile terminologies- fibre, yarn, weave, fabric, classification of fibres, yarns and weaves, Identification of fibres and weaves. The manufacturing process of major natural and manmade fibres, properties and their end, Different methods of fabric construction- woven, knitted and non-woven fabrics, their properties and end, Textile finishes-classification, processing and purposes of finishes  **Apparel Designing**  Body measurements-procedure, needs, figure types and anthropometry, Equipment and tools used for manufacturing garments-advancements and attachments used for sewing Types of machines used and their parts. Elements and principles of design and its application to apparel. Illustrations and parts of Garments. Fashion-Terminologies, fashion cycle, fashion theories, fashion adoption, fashion forecasting and factors affecting fashion. Pattern making-drafting, draping and flat pattern-making techniques, pattern alteration and dart manipulation techniques | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Resource Management and Interior Design** | | 1. **Ours** | | | | | | | |
| **Resource Management and Consumer Issues**  Management concepts, approaches, management of time, energy, money, space, motivating factors, motivation theories, and decision-making. Functions of management-planning, supervision, controlling, organizing, evaluation, family life cycle stages, availability, and use of resources. Resources-classification, characteristics, factors affecting use, resource conservation, time management, work simplification techniques, classes of change, fatigue, and its management. Management of natural resources- land, forest, water, air, water harvesting, municipal solid waste management, the concept of sustainable development, SDGs.  **Housing And Interior Design**  Design fundamentals – elements of art, principles of design, principles of Composition. Colour – dimensions of colour, psychological effects of colour, colour schemes, and factors affecting the use of colours. Space planning and design-housing need and important, principles of planning spaces, types of house plans, economy in construction, planning for different income groups. Building regulations- norms and standards, zoning, housing for special groups and areas, and housing finance. | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Family Studies** | | 1. **Ours** | | | | | | | |
| **Family Studies**  Dynamics of marriage and family relationships. Family welfare approaches, programmes and challenges, role in national development. Domestic violence, marital disharmony, conflict, and the resolution of conflicts. Parent education, positive parenting, and community education. Family disorganization, single-parent families.  **Child/Human Development**  Principles of growth and development, care during pregnancy and prenatal and neonatal development. Theories of human development and behaviour. Early childhood care and education – activities to promote holistic development. Influence of family, peers, school, community and culture on personality development. | | | | | | | | | | | | | | |
| **Unit:5** | | | | | **Extension Management & Communication For Development** | | 1. **Hours** | | | | | | | |
| **Extension Management and Community Development**  Historical perspectives of extension–genesis of extension education and extension systems in India and other countries, objectives of extension education and extension service, philosophy and principles of extension programme development. Programme management- need assessment, situation analysis, planning, organization, implementation, monitoring and evaluation. Extension methods and materials- interpersonal, small and large group methods, audiovisual aids-need, importance, planning, classification, preparation and field testing, use and evaluation of audio-visual materials. Curriculum development and planning for extension education and development activities, Bloom’s taxonomy of educational objectives and learning. Non-Formal, adult and lifelong education-historical perspectives, concept, theories, approaches, scope, methods and materials used, challenges of implementation and evaluation, issues to be addressed. Training, skill development and capacity building for human resource development-methods of training, entrepreneurship development. Community development- perspectives, approaches, community organization, leadership, support structures for community development, Panchyati raj institutions, NGOs and community-based organisations. People’s participation and stakeholders’ perspectives, Participatory Learning and Action-methods and techniques. Development programmes in India for urban, rural and tribal population groups-programmes for nutrition, health, education, wage and self- employment, women’s development, skill development, sanitation and infrastructure. Research methods-scientific report writing, presentation of data, interpretation and discussion.  **Communication For Development**  Basics of communication- nature, characteristics, functions, process, models, elements, principles, barriers, perception, persuasion and empathy, types of communication, levels (settings) of communication transactions, and the process of listening. Communication systems and communication theories- human interaction theories, mass communication theories, message design theories, communication systems, culture and communication. Concept of development- theories, models, measurement and indicators of development. Concept of development- communication models and approaches, diffusion and innovation, mass media, social marketing. | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | **02 hours** | | | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | **60 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Text book of Home Science, Premlatha Mullick, 2011 | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | Food science 4th edition, Sri lakshmi (2007) | | | | | | | | | | | | | |
| 2 | Textbook of Nutrition and Dietetics, Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013) | | | | | | | | | | | | | |
| 3 | The Complete Book of Fashion Design,Tata S.L., Edwards M.S., 1982 | | | | | | | | | | | | | |
| 4 | Resource Management for Individuals and Families (4th Edition), Elizabeth B. Goldsmith,2009 | | | | | | | | | | | | | |
| 5 | Developmental Psychology, Hurlock, E.B. (2008). | | | | | | | | | | | | | |
| 6 | Development through the lifespan, Berk. L.E. (2007) | | | | | | | | | | | | | |
| 7 | Extension Communication and Management,G. L. Ray,2015 (8th Edition) | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | Home-Science-(321)-https://nios.ac.in/online-course-material/sr-secondary-courses/Home-Science-(321).aspx | | | | | | | | | | | | |
| 2 | | Fundamentals of Food Process Engineering -https://onlinecourses.nptel.ac.in/noc18\_ar08/ | | | | | | | | | | | | |
| 3 | | Communication Technologies in Education <https://onlinecourses.swayam2.ac.in/cec25_ed11/preview> | | | | | | | | | | | | |
| 4 | | M-01.Textile fibres, M-02.Natural fibres <https://youtu.be/LjkMijDsD7Q>, <https://youtu.be/3a6Inmr8Nm8> | | | | | | | | | | | | |
| **Course Designed By: Dr.K.Sangeetha** | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | L | L | S | M | M | S | S | L | L | L |
| **CO2** | S | S | S | S | S | S | S | S | S | S |
| **CO3** | M | M | S | S | S | S | S | L | L | M |
| **CO4** | L | L | S | M | L | S | M | S | L | S |
| **CO5** | L | L | L | M | S | M | L | M | S | L |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **2EB** | | **HOME TEXTILES** | **L** | | **T** | | | **P** | **C** |
| **Elective** | | | | | | 4 | | - | | | - | 4 |
| **Pre-requisite** | | | | | | Basic knowledge about home textile products | **Syllabus Version** | | | | | 2025 – 2026 | |
| **Course Objectives:** | | | | | | | | | | | | | |
| * 1. Learn about Home Textiles in India.   2. Different Types of Home Textile production and Application in seating   3. To acquire knowledge about windows   4. To understand Table and bed Linens and its types   5. To be aware of Functional requirement for the application of Home Textiles in Floor Coverings | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | | | Understand Home textiles and its products | | | | | | | | | K2 | |
| 2 | | | Evaluate different types of home textile manufacturing and applications | | | | | | | | | K5 | |
| 3 | | | Apply windows applications and end uses | | | | | | | | | K3 | |
| 4 | | | Analyze Table and bed Linens | | | | | | | | | K4 | |
| 5 | | | Evaluate Functions of Home textiles | | | | | | | | | K5 | |
| **K1** – Remember; **K2** – Understand; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate; **K6** – Create | | | | | | | | | | | | | |
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| **Unit:1** | | | | | **Home Textile in India** | | | | | | **12 hours** | | |
| **Home Textile in India**: Introduction, history, exports – Trends in home textile industry – Domestic and Global market for home textiles, Major production centers in India.  **Home Textile Products** – Role of fabric in interior furnishing – Pro  perties required – Factors affecting that selection of fabrics – Different fibers used, Standard sizes, Fabric requirement and cost calculations. | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Seating and Bed Linens** | | | | | **12 hours** | | | |
| **Seating:** Structures, lay out, Range & size – Material used – Manufacturing – Double cloth – loop pile – cut pile – cushion foam – multi layer sheets – seat covers – types & materials.  **Bed Linens** – Definitions – design & size – Bed spread designs – chenille and organic bed spreads – dimensions – Bed sheets – types – fitted sheets – manufacturing process – bed skirts – types – mattress – domestic and international market for bed linens – pillows – Quilt: types– Machine, Hand quilting – Knotted and tied – Trapunto – Shadow trapunto – export and import contributions – process sequence for bed linen – scope in global market. | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Windows and Wall Coverings** | | **12 hours** | | | | | | |
| **Windows**: Basic sizes, Lay outs, Materials – Voiles, Nets – Sun filters – Semi sheers – Reflective textiles – Draperies – Types – Valances – Types – Shades – Types – Swags –– Headings – Types- Distribution Channels – Curtains – Introduction – Types of curtains – Characteristics of curtain fabrics.  **Wall Coverings**: Requirements, benefits, types – carpet as wall covering – Materials and manufacturing of fabrics – Application, end use colour concepts. | | | | | | | | | | | | | |
| **Unit:4** | | | | | **Linens** | | **12 hours** | | | | | | |
| **Table Linens** – Place mats and table cloths – Placemats – Varieties of placemats – Making process flow – Instruction – tips & warnings – Reversible placemats – Stone placemats– table cloths – Types, material &manufacturing.  **Kitchen Linens** – Introduction – Material used – Kitchen products – Oven mitten – Pot holder – Apron – Napkins – Doilies – Kitchen mats – Dining table cloth – teacozy–kitchen curtain– Table runner – Kitchen rugs – Types of stitches and seams used.  **Bath Linen:** Categories – bath robe – Sizes & design elements – Terry towels – Classification – Ranges – Fiber used – Standard sizes – Construction of terry towels Market share – Production centers. | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Floor Coverings** | | | **10 hours** | | | | | |
| **Floor Coverings:** Definitions – Fiber used – Types of carpets – Comparison of carpets – broad loom carpets –– Benefits of carpets and rugs – Carpet cushions – Manufacturing Process –Rugs-Types of rugs – Knots and oriental rugs – Embroidered rugs – Natural leather rugs–Advances- Earth carpets – Thinking carpets – Magic carpets – Lawn carpets. | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **02 hours** | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | | **60 hours** | | | | | |
| **Text Books** | | | | | | | | | | | | | |
| 1 | | Home Textiles, Gopalakrishnan.D and T.Karthik, Astral. 2020 | | | | | | | | | | | |
| 2 | | Performance of Home textiles, Subrata Das, Woodhead, 2010 | | | | | | | | | | | |
| 3 | Traditional Knowledge of Household, Ghosh, AshisKumar, Daya, 2011. | | | | | | | | | | | | |
| 4 | Home furnishing, V.Ramesh Babu, S.Sunderesan, Woodhead, 2018. | | | | | | | | | | | | |
| 5 | Performance of Home Textiles, [Subrata Das](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Subrata+Das&search-alias=stripbooks), Woodhead, 2018. | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | |
| 1 | Inside Today’s Home Hot, Rinehart and Winston, Faulkner 1965. | | | | | | | | | | | | |
| 2 | Home Management, Varghese, M.A., Ogale, M.M, and Srinivasan, K., [New Age Internationa](https://www.sapnaonline.com/shop/publisher/new-age-international--p-ltd),2017. | | | | | | | | | | | | |
| 3 | Interior Design and Decoration’, Premavathy, Parveen Pannu, CBS Publishers and Distributors 1st Edition, 2013 | | | | | | | | | | | | |
| 4 | Art in Every Day Life, [Harriet Goldstein](https://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Harriet+Goldstein&text=Harriet+Goldstein&sort=relevancerank&search-alias=books), Goldstein Press, 2007 | | | | | | | | | | | | |
| 5 | [Know Your Home Furnishings](https://www.amazon.com/Know-Furnishings-Virginia-Hencken-Elsasser/dp/1628927569/ref=sr_1_1?dchild=1&keywords=Home+furnishing&qid=1598612239&s=books&sr=1-1),Virginia Hencken Elsasser and Julia Sharp, Fairchild Books; 2nd Edition, 2016. | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | |
| 1 | | <https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827> | | | | | | | | | | | |
| 2 | | <https://shodhganga.inflibnet.ac.in/bitstream/10603/102467/11/11_chapter%203.pdf> | | | | | | | | | | | |
| 3 | | <https://www.businesswireindia.com/welspun-secures-patent-for-new-line-of-augmented-reality-home-decor-50283.html> | | | | | | | | | | | |
| 4 | | <https://textilelearner.blogspot.com/2014/08/fabrics-for-interior-home-textile.html> | | | | | | | | | | | |
| 5 | | [https://www.fiber2fashion.com/industry-article/84/home-textiles-market-in-asia](https://www.fibre2fashion.com/industry-article/84/home-textiles-market-in-asia) | | | | | | | | | | | |
| 6 | | <https://ihmkolkata.blogspot.com/2013/05/wall-coverings.html> | | | | | | | | | | | |
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| **Course Designed By:** Dr.M.Sumithra | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | M | S | M | M | | S | M |
| **CO2** | M | L | M | L | L | S | M | S | | S | M |
| **CO3** | M | S | S | M | M | S | M | S | | S | M |
| **CO4** | S | S | S | M | M | S | M | S | | M | S |
| **CO5** | S | M | S | S | L | S | S | M | | S | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **2EC** | **APPLIED PHYSICS AND CHEMISTRY** | **L** | | | **T** | | **P** | **C** |
| **Elective** | | | | | 4 | | | - | | - | 4 |
| **Pre-requisite** | | | | | Any science degree | **Syllabus Version** | | | | 2025 – 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn the chemistry of textile fibres, dyes and detergents. 2. Learn the physical properties of textile polymers and fibres. | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | | | Understand the natural and synthetic polymers in textile fibres. | | | | | | | | K2 | |
| 2 | | | Understand the various dyes used in the textile industry. | | | | | | | | K2 | |
| 3 | | | Understand the detergents and soaps used in textile applications. | | | | | | | | K2 | |
| 4 | | | Analyze the structural properties of textile fibres. | | | | | | | | K4 | |
| 5 | | | Analyze the mechanical and thermal properties of textile fibres. | | | | | | | | K4 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create | | | | | | | | | | | | |
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| **Unit:1** | | | | **Textile Fibres, Polymers and Natural polymers** | | | | **12 hours** | | | | |
| **Textile Fibres:** Classification – natural and manmade fibres, Chemical structure and Composition.  **Polymers:** Introduction – Classification – Types and mechanism of polymerization – Degree of Polymerization – Crystalline vs. amorphous regions. Synthesis and application of polymers: Polyethylene (LDPE & HDPE), Polyacrylonitrile, Polyesters (PET), Polyamides – Nylon 6 and Nylon 66. **Natural polymers:** Natural resins, Polysaccharides, Starch, Glycogen, Cellulose, Preparation and processing of cellulose.  **Synthetic fibres**: Important requirements of a fibre, Difference between natural and synthetic fibres, Properties of synthetic fibres, Preparation of synthetic fibres, Methods of spinning, application of synthetic fibres, Rayon or artificial silk, Nitrocellulose rayon or pyroxylin, Cuprammonium rayon, Viscose rayon, Properties of viscose rayon, Nylon-6 (Kapron), Various routes of nylon, Nylon -66, Properties of nylon intermediates. Nylon-6 or perlon L. Properties of nylon-66. | | | | | | | | | | | | |
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| **Unit:2** | | | | **Dyes** | | | **12 hours** | | | | | |
| **Dyes**: Sensation of colour, Colour and constitution, Nomenclature. Dyeing, methods of dyeing, direct dyeing, vat dyeing, mordant dyeing, Substantive dyeing, disperse dyeing, formation of dye on the fibre, dyeing with reactive dyes, dyeing of wool with acid dyes, cross dyeing, basic operation of dyeing, dye intermediates.  **Classification of dyes: Classification of dyes based on chemical constitution,** nitroso dyes, nitro dyes, azo dyes, acid azo dyes, methyl orange, methyl red. **Classification of dyes based on their mode of application**, acid dyes, basic dyes, direct or substantive dyes, modern or adjective dyes, ingrain or developed dyes, Ice colours, Sulphur dyes, pigment dyes, Solvent or spirit soluble dyes. | | | | | | | | | | | | |
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| **Unit:3** | | | | **Detergents and Soaps** | | **10 hours** | | | | | | |
| **Detergents:** Principal groups of synthetic detergents, Classification of surface active agents, Anionic detergents.  **Soaps:** General consideration in soap making, Manufacture of soaps, Metal soaps, Oil to be used soaps, Cleansing action of soaps. Alkyl sulphonates, alkyl aryl sulphonates, Alkyl sulphates, Amide sulphonates, Miscellaneous compounds. Cationic, Non-ionic and Amphoteric detergents. **Surfactants:** Classification and applications of surfactants, Biodegradability of surfactants, Ecofriendly detergent containing enzymes, Ecofriendly detergents-zeolites, Detrimental effects of detergents.  **Green chemistry approaches in textile industry**. | | | | | | | | | | | | |
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| **Unit:4** | | | | **Structural Properties** | | **12 hours** | | | | | | |
| **Crystallinity**- % of Crystallinity& orientation of polymer; measurement of crystallinity& orientation – powder XRD analysis. Single fibre structure – Single crystal XRD analysis.  **Surface analysis** – Optical microscopy, FE-SEM, Energy Dispersive Spectroscopy (EDAX).  **Optical properties** – Optical absorption or transmittance – UV-Vis-near IR Spectroscopic methods – lower & upper cut-off wavelength, % of transmittance. | | | | | | | | | | | | |
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| **Unit:5** | | | | **Mechanical &Thermal properties** | | **12 hours** | | | | | | |
| **Mechanical properties** – Tensile strength & Young’s modulus, density measurement methods.  **Thermal analysis** – TG & DTA, DSC, NMR.  **Swelling phenomenon of textile fibres** – types of swelling – factors influencing swelling – effects of swelling. | | | | | | | | | | | | |
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| **Unit:6** | | | | **Contemporary Issues** | | **02 hours** | | | | | | |
| 1. Learn industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | **60 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | |
| 1 | | Industrial Chemistry, B.K.Sharma, Krishna Prakashan Media (P) Ltd, Goel Publishing house, 19th edition 2016. | | | | | | | | | | |
| 2 | | Handbook of Tensile Properties of Textile and Technical Fibres, A. R. Bunsell, Elsevier Science, 2009. | | | | | | | | | | |
| 3 | | Crystals and Crystallinity in Polymers: Diffraction Analysis of Ordered and Disordered Crystals, Claudio De Rosa, Finizia Auriemma, Wiley, 2013. | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | |
| 1 | | Text book of Organic Chemistry, Soni P L &Chawla H M, S Chand & Co., 2010. | | | | | | | | | | |
| 2 | | Textile Chemistry, Thomas Bechtold& Tung Pham, De Gryuyter, 2019. | | | | | | | | | | |
| 3 | | Chapter 3 Green Chemistry in Textiles, *Sustainable Innovations in Textile Chemistry and Dyes*, S.S. Muthu (ed.), Springer Nature Singapore, 2018. | | | | | | | | | | |
| 4 | | Physical Properties of Textile Fibres, J. W. S. Hearle, W E Morton, Elsevier Science, 2008. | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | |
| 1 | <https://www.researchgate.net/publication/303389573_Green_chemistry_in_Textile_Industry> | | | | | | | | | | | |
| 2 | <https://www.researchgate.net/publication/263561504_Green_chemistry_and_the_textile_industry> | | | | | | | | | | | |
| 3 | <https://pubs.acs.org/doi/pdf/10.1021/ie303627x> | | | | | | | | | | | |
| 4 | <https://levistrauss.com/wp-content/uploads/2016/11/UC-Berkeley_Haas-Case-Study_Driving-Adoption-of-Green-Chemistry.pdf> | | | | | | | | | | | |
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| **Course Designed By:** Dr.K.Amutha | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | M | L | L | M | M | M | M | M | S |
| **CO2** | S | M | L | L | M | M | M | M | M | S |
| **CO3** | S | M | L | L | M | M | M | M | M | S |
| **CO4** | S | S | M | L | S | M | M | M | M | L |
| **CO5** | S | S | M | L | S | M | S | M | M | L |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **2ED** | | **TECHNICAL TEXTILES-2** | **L** | **T** | | | | **P** | | **C** |
| **Elective** | | | | | | **4** | **-** | | | | **-** | | **4** |
| **Pre-requisite** | | | | | | Basic knowledge about Textile science | **Syllabus Version** | | | | 2025 - 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about the production methods used for the Technical Textiles. 2. Learn in detail about the functions and properties of Technical Textiles. 3. Learn about the applications and latest developments in Technical Textiles. | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | | Understand about home textiles for various applications | | | | | | | | | | K2 | |
| 2 | | | Understand about industrial textiles for various applications | | | | | | | | | | K2 | |
| 3 | | | Understand about medical textiles for various applications | | | | | | | | | | K2 | |
| 4 | | | Understand about mobile textiles for various applications | | | | | | | | | | K2 | |
| 5 | | | Design technical textile products for various applications | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | |
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| **Unit:1** | | | | | **Home Textiles** | | | | | **10 hours** | | | | |
| **Home Textiles:** Introduction, Fibers used, Properties, classification, Applications – furniture, carpeting, interior decoration, fireproofing, fiberfill, stuffed toys, mosquito nets, vacuum cleaner filters. | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Industrial Textiles** | | | | **12 hours** | | | | | |
| **Industrial Textiles:** Introduction, fibers used - types, functions and properties and characteristics.  Applications and latest trends in its field. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Medical Textiles** | | **12 hours** | | | | | | | |
| **Medical Textiles:** Introduction, Fibers used, Properties, classification- Non – Implantable, Implantable, Extra corporal devices, Health care /Hygiene Products and Applications. Wearable assistants for mobile health monitoring. Recent trends in Medical Textiles. | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Mobile Textiles** | | **12 hours** | | | | | | | |
| **Mobile Textiles:**  Introduction, fibers used - types, functions and properties and characteristics, Applications – Seat cover fabric, upholstery, seat belts, helmets, cabin filters, insulation felts, automotive interior carpets, tufted carpets, airbags, airline disposables, aircraft webbings. | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Product Development** | | **12 hours** | | | | | | | |
| Product Development in Hometech, Indutech, Meditech and Mobiltech. | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | **02 hours** | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | **60 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Hand book of Technical textiles, A. R. Horrocks and S. C. Anand, Wood head publishing ltd, England, 2000 | | | | | | | | | | | | | |
| 2 | Technical Textiles and its Application, Dr.S.Grace Annapoorani, LASER Park Publishing House, India, 2017 | | | | | | | | | | | | | |
| 3 | Textiles for Industrial Applications, R Senthil Kumar, CRC Press, 2013 | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | Textile Fibers: Developments and Innovations, Kothari, V., New Delhi: IAFL Publications, 2000. | | | | | | | | | | | | | |
| 2 | Handbook of Industrial Textiles, SabitAdanur, Wellington Sears CRC Press ,1995 | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/130> | | | | | | | | | | | | |
| 2 | | https://www.textile Learner blogspot.con | | | | | | | | | | | | |
| 3 | | <https://textilelearner.blogspot.com/2020/03/nfc-embedded-smart-textiles.html> | | | | | | | | | | | | |
| 4 | | <https://www.technical-textiles.net> | | | | | | | | | | | | |
| 5 | | <https://www.sciencedirect.com/topics/materials-science/smart-textiles> | | | | | | | | | | | | |
| **Course Designed By:** Dr.K. Amutha | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | S | L | S |
| **CO2** | S | S | S | S | M | S | S | S | L | S |
| **CO3** | S | S | S | M | S | S | S | S | L | S |
| **CO4** | S | M | S | M | M | S | S | S | M | S |
| **CO5** | S | M | S | S | S | S | S | S | M | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **23P** | **TEXTILE TESTING** | **L** | | **T** | **P** | **C** |
| **Core - Practical** | | | | | - | | - | 4 | 4 |
| **Pre-requisite** | | | | | Basic knowledge about textile materials and test parameters, sampling and test specimen preparation. | **Syllabus Version** | | | 2025 - 2026 | |
| **Course Objectives:** | | | | | | | | | | |
| The main objectives of this course are to:  1. Test the quality parameters of the textiles using suitable instruments.  2. Evaluate the quality based on the test results.  3. Gain practical experience on the quality of textiles. | | | | | | | | | | |
|  | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | |
| 1 | | | Understand textile testing. | | | | | | K2 | |
| 2 | | | Apply knowledge and skill of textile testing. | | | | | | K3 | |
| 3 | | | Analyze various quality parameters of textile materials. | | | | | | K4 | |
| 4 | | | Evaluate the quality of materials based on the results. | | | | | | K5 | |
| 5 | | | Analyze the suitability of materials for specific end use. | | | | | | K4 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | |
|  | | | | | | | | | | |
| Testing and Evaluation of: 1.Yarn Count, lea strength and CSP & Twist  2.Fabric physical parameters- EPI, PPI, Thickness, GSM, Dimensional stability to washing  3. Air Premeability of fabric  4. Flammability of fabric  5.Stiffness of fabric  6.Abrasion Resistance of fabric  7.Crease Recovery of fabric  8.Drape of fabric  9.Pilling of fabric  10.Tensile Strength of fabric  11.Tear Strength of fabric  12.Bursting Strength of fabric  13.Colour Fastness to Washing, Crocking of fabric  14.Colour Fastness to Perspiration of fabric | | | | | | | | | | |
|  | | | | | | | | | | |
| **Total hours** | | | | | | | **75 hours** | | | |
| **Text Books** | | | | | | | | | | |
| 1 | A Practical Guide to Textile Testing, Amutha.K, CRC Press, 2016 | | | | | | | | | |
| 2 | Textile Testing, Raul Jewel, APH Publishing Corporation,2005 | | | | | | | | | |
| 3 | Advanced Textile Testing Techniques, Sheraz Ahmad et al., CRC Press, 2017. | | | | | | | | | |
|  | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | |
| 1 | Fabric Testing, Ed. Jinlian Hu, Woodhead Publishing Ltd., 2008. | | | | | | | | | |
| 2 | Principles of Textile Testing: An Introduction to Physical Methods of Testing Textile Fibers, Yarns and Fabrics, J.E.Books, Butterworths,1986 | | | | | | | | | |
|  | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | |
| 1 | | <https://www.youtube.com/playlist?list=PLCC58838EBECB7149> | | | | | | | | |
| 2 | | <https://www.youtube.com/channel/UCXw7428MTvquxKUZEOr4EAA/videos?view=0&sort=dd&flow=grid> | | | | | | | | |
| 3 | | <https://www.youtube.com/channel/UCGqWXJgzpXyyu283QbdYiFQ/videos> | | | | | | | | |
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| **Course Designed By:**Dr.K.Amutha | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | L | M | L | S | M | L | S | S | S |
| **CO2** | S | S | S | S | S | L | M | S | S | S |
| **CO3** | S | S | S | M | S | L | S | S | S | S |
| **CO4** | S | S | S | S | S | S | S | S | S | S |
| **CO5** | S | S | S | M | S | L | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **23Q** | **ADVANCED GARMENT CONSTRUCTION** | **L** | | **T** | **P** | **C** |
| **Core - Practical** | | | | |  | **-** | | **-** | **4** | **4** |
| **Pre-requisite** | | | | | Basic knowledge in garment construction | **Syllabus Version** | | | 2025 - 2026 | |
| **Course Objectives:** | | | | | | | | | | |
| The main objectives of this course are to:  1. Study about Machine adjustments in stitches  2. Learn about specialized work wear  3. Learn about industry method of inner wear  4. Develop need based garment  5.Develop garment accessory making | | | | | | | | | | |
|  | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | |
| 1 | | | Understand Machine adjustments for stitches | | | | | | K2 | |
| 2 | | | Create specialized work wear | | | | | | K6 | |
| 3 | | | Apply industry method of inner wear garments | | | | | | K3 | |
| 4 | | | Examine need based garment | | | | | | K4 | |
| 5 | | | Evaluate garment accessory making | | | | | | K5 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | |
| 1. **Machine Adjustments**: Single Needle Lock Stitch Machine (SNLS) – Select fabrics of different construction and modify the stitches per inch and study the effects. 2. Design and construct **Uniform Clothing** for people like Policemen / Army / Navy / Doctors/Industry Workers - Draping/Drafting methods 3. Design and construct **Innerwear** for men / women/children (Knit wear) - Draping/Drafting methods 4. Design and construct **Garment for Special people** /Bed ridden patients - Draping/Drafting methods 5. Design and Construct **Accessories**: Gloves (Knit wear) / Cap / Socks (Knit wear) / Veils / Belt / Bow / Tie / Bags | | | | | | | | | | |
|  | | | | | | | | | | |
| **Total hours** | | | | | | | **75 hours** | | | |
| **Text Books** | | | | | | | | | | |
| 1 | Metric pattern cutting for mens wear, Winifred Aldrich, 5 th edition, wiley India Pvt.Ltd, Reprint 2015. | | | | | | | | | |
| 2 | Garment manufacturing technology, Rajkishorenayak, Rajiv padhye,Woodhead, 2015. | | | | | | | | | |
| 3 | Couture sewing techniques, Anita Tyagi, Sonali,2014. | | | | | | | | | |
| 4 | Garment construction, Anita Tiyagi, Sonali, 2012 | | | | | | | | | |
| 5 | Garment technology, Aftab Ahmed Khan, Random, 2013. | | | | | | | | | |
| 6 | Zarapkar System of cutting, Zarapkar Tailoring College, Navneet, 2010. | | | | | | | | | |
| 7 | Lifestyle Fashion styles, Samuel, K, Orbis Book Publishing Corporation Ltd. 1986. | | | | | | | | | |
| 8 | Inside Fashion design, 2nd Edition Sharon Lee Tate, Mona Shafer Edwards, Harper and row, 1984. | | | | | | | | | |
| 9 | Reader’s Digest Complete Guide to Sewing, Reader’s Digest Association, 1982. | | | | | | | | | |
| 10 | Basic Fashion Design-Ireland, Patrick john, London, B.T. Batsford, 1972. | | | | | | | | | |
| **Reference Books** | | | | | | | | | | |
| 1 | Pattern Magic, Tomoko Nakamichi, Laurence king, 2011. | | | | | | | | | |
| 2 | Advanced Garment Construction Guide, Dr.M.SumithraWoodhead publishing India in Textiles, 2020 | | | | | | | | | |
| 3 | Mertic pattern cutting for women’s wear,Wiley, Winifred Aldrich,5th Edition, 2015. | | | | | | | | | |
| 4 | Indian garment design course book, Mr.Ashish Kashyap, Ms.Rashmi Sharan and Ms.RishikaJalali in coordination with Ms.RupikaJain,Usha international limited, edition 2011 | | | | | | | | | |
| 5 | Design idea and accessories, Bhargav R, .first B.Jain, 2005. | | | | | | | | | |
| 6 | Pattern Cutting,Melliar,B.T. Batsford, 1968. | | | | | | | | | |
| 7 | Fabric Sewing Guide, Claire Shaeffers,K.P books, 2009. | | | | | | | | | |
|  | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | |
| 1 | | <https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827> | | | | | | | | |
| 2 | | <https://www.my-mooc.com/en/mooc/designing-and-creating-skirts/> | | | | | | | | |
| 3 | | <https://www.classcentral.com/course/swayam-understanding-design-17831> | | | | | | | | |
| 4 | | <https://www.edx.org/professional-certificate/hkpolyux-fashion-design-and-creation> | | | | | | | | |
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| **Course Designed By:** Dr.M.Sumithra | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | L | S | S | M | M | S | S | M | M | L |
| **CO2** | S | M | S | S | S | S | S | S | S | M |
| **CO3** | L | M | S | S | M | S | S | M | S | S |
| **CO4** | M | S | S | S | S | S | S | S | S | M |
| **CO5** | S | M | S | M | M | S | S | M | S | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **GS113** | | **SUSTAINABLE FASHION** | **L** | | | | | **T** | **P** | **C** |
| **Supportive** | | | | | | 2 | | | | | 0 | 0 | 2 |
| **Pre-requisite** | | | | | | **Any UG Degree** | **Syllabus Version** | | | | | | 2025 – 2026 | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about sustainability of Fashion industry. 2. Learn about ethical fashion. 3. Learn about Eco textiles and Eco friendly fashion labels. | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | | Understand sustainability of fashion industry. | | | | | | | | | | K2 | |
| 2 | | | Analyze ethical fashion. | | | | | | | | | | K4 | |
| 3 | | | Analyze eco-textiles and eco-friendly fashion labels. | | | | | | | | | | K4 | |
| 4 | | | Evaluate sustainable fashion products. | | | | | | | | | | K5 | |
| 5 | | | Create upcycled / downcycled products. | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:1** | | | | | **Sustainability in Fashion** | | | | | | **6 hours** | | | |
| Sustainable Development Goals (SDG) – The 17 goals – History and implementation.  Introduction: Fashion, Sustainability, Pillars of sustainability, Sustainable fashion – meaning and importance. | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Fashion and Clothing** | | | | | **5 hours** | | | | |
| Clothing lifecycle, clothing care, fast and slow fashion, clothes repair and re-use | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:3** | | | | | **Ethical Fashion** | | | | **6 hours** | | | | | |
| Concepts of recycling and upcycling. Carbon footprint, water footprint and energy consumption of fashion industry. Circular economy in fashion industry. | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Ethical consumption** | | | | **6 hours** | | | | | |
| Eco-textiles, green consumerism and waste reduction, consumer responsibility towards sustainable fashion. 3Rs – Reduce, Reuse and Recycle. | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Sustainable Fashion Brands and Labels** | | | **5 hours** | | | | | | |
| Sustainable fashion designers, sustainable fashion brands, Eco-friendly fashion labels | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **2 hours** | | | | | | |
| 1. Prepare and submit an upcycled/downcycled product made from old clothes. 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
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| **Total Lecture hours** | | | | | | | | **30 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Sustainable Fashion Handbook, Black, S, Thames and Hudson, 2013. | | | | | | | | | | | | | |
| 2 | Re-Fashioned- Cutting Edge Clothing from Upcycled Materials, Brown S, Lawrence King Publishing, 2013. | | | | | | | | | | | | | |
| 3 | Fashion and Sustainability-Design for Change, Fletcher K, Lawrence King Publishing, 2012. | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | Cut up Couture- Edgy Upcycled Garments to Sew, Yamase K, Interweave, 2012. | | | | | | | | | | | | | |
| 2 | Sustainable Fashion and Textiles- A Design Journey, Fletcher K, Lawrence King Publishing, 2008. | | | | | | | | | | | | | |
| 3 | Sustainable Luxe- A Guide to Feel Good Fashion, Phillips J, Create Space Publishing, 2013. | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <https://www.coursera.org/learn/sustainable-fashion> | | | | | | | | | | | | |
| 2 | | <https://www.edx.org/course/circular-fashion-in-a-sustainable-clothingindustry> | | | | | | | | | | | | |
| 3 | | <https://www.my-mooc.com/en/mooc/sustainable-fashion/> | | | | | | | | | | | | |
| 4 | | <https://www.sustainablefashionmatterz.com/what-is-sustainable-fashion> | | | | | | | | | | | | |
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| **Course Designed By:** Dr. K. Amutha | | | | | | | | | | | | | | |

**VALUE ADDED COURSE**

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| 1. **KALAMKARI** | | | | | | | |
| **Name of the Department** | | | | | | **Textiles and Apparel Design** | |
| **Name of the Faculty Member i/c**  **With Complete Address with Phone and e-mail** | | | | | | **Dr.M.Jayakumari,**  Assistant Professor,  Department of Textiles and Apparel Design, Bharathiar University, Coimbatore.  Email: [jkkumaritad@buc.edu.in](mailto:jkkumaritad@buc.edu.in)  Ph:9500360911 | |
| **Inter / Intra Department Course** | | | | | | Inter Department course | |
| **Duration of the Course** | | | | | | 40 hrs | |
| **Eligibility** | | | | | | UG Degree | |
| **Number of Candidates to be Admitted** | | | | | | 25 | |
| **Registration Procedure** | | | | | | By contacting the department through email or in person | |
| **Job Opportunities:** Entrepreneur, own boutique, Retailers, Entrepreneur, Own boutique, Retailers and Fashion designers. | | | | | | | |
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| **The objectives of the Course are:** | | | | | | | |
| The main objectives of this course are to: | | | | | | | |
| 1 | | | Understand our culture and textiles that was practiced from generations to generations. | | | | |
| 2 | | | Evaluate and adopt a craft and bring to the forefront of modern world and mainstream home and lifestyle fashion. | | | | |
| 3 | | | Analyse the Traditional crafts which have often been described as historically eco sensible. | | | | |
| 4 | | | Dealt with conversion of materials into products, using primarily hand skills with simple tools. | | | | |
| 5 | | | Employ the local traditional wisdom. | | | | |
| **Course Content** | | | | | Lecture / Practical / Project / Internship | | |
|  | | | | | | | |
| **Module 1** | | | | An opportunity to learn two distinctive styles of kalamkari art in India(theory) | | | **4 hours** |
| **Module 2** | | | | The Magical Kalam made of bamboo dipped in to the dye solution, creates calligraphic effect, since the fabric belongs to painted textiles, one can explore self through connecting with tradition.(theory) | | | **4 hours** |
| **Module 3** | | | | Create a Kalamkari fabric which is also known as healing fabric, as the colors, motifs, compositions and the narration of magical forms create an aura that heals an individual physically and spiritually | | | **4 hours** |
| **Module 4** | | | | Evaluate its sustainability and to learn its harmless environment and surrounding. | | | **4 hours** |
| **Module 5** | | | | Create Kalamkari designs which are drawn generally by free hand using a pen and further the filling is also completely done with hand. | | | **4 hours** |
| **Module 6** | | | | Create Kalamkari art which is generally done using earthy colors like mustard, indigo, rust, green and black. | | | **4 hours** |
| **Module 7** | | | | Kalamkari on clothes use natural and mineral dyes. They are both hand painted and block printed on clothes. Besides, it is also involves weaving.. | | | **4 hours** |
| **Module 8** | | | | The typical Kalamkari art has figures with round shapes and border designs | | | **4 hours** |
| **Module 9** | | | | Three styles of kalamkari namely **the kalahasti, the machlipatnam style and the karrupur style** | | | **4 hours** |
| **Module 10** | | | | Kalamkari paintings have also hit the fashion industry. Its unique effect is used in garments, bedsheets, curtains etc. | | | **4 hours** |
|  | | | | **Total** | | | **40 hours** |
| **Books** | | | | | | | |
| 1 | Kalamkari& traditional design heritage of indiapaperback – 1, 2007 | | | | | | |
| 2 | Design Resource Kalamkari Work - Srikalahasti Hand Painted Stories, Prof. BibhuduttaBaral, Divyadarshan C. S. and Tejesh J. NID Campus, Bengaluru | | | | | | |
|  | | | | | | | |
| **References** | | | | | | | |
| 1 | Kalamkari, the Art of Painting with Natural Dyes,Sharad Chandra Independent Researcher | | | | | | |
| 2 | Retracing Kalamkari’s journey: from classic to a contemporary textile art  Soma GhoshSalar Jung Museum, Hyderabad, Ministry of Culture, Govt. of India. | | | | | | |
|  | | | | | | | |
| **Related Online Contents** | | | | | | | |
| 1 | | http://www.dsource.in/resource/kalamkari-work-srikalahasti | | | | | |
| 2 | | www.dsource.in | | | | | |
| 3 | | https://issuu.com/shefalika/docs/kalamkari\_coffee\_table\_book | | | | | |
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**SEMESTER III**

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| **Course code** | | | | **33A** | | **APPAREL QUALITY STANDARDS AND IMPLEMENTATION** | **L** | | | | | **T** | **P** | **C** |
| **Core** | | | | | | 4 | | | | | - | - | 4 |
| **Pre-requisite** | | | | | | Basic knowledge about textile and apparel industry and quality requirements | **Syllabus Version** | | | | 2025 – 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Study about national and international standards pertaining to textile industry. 2. Demonstrate Eco standards pertaining to fabric and apparel. 3. Study about quality management of apparel industry. | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | | Understand the national and international standards pertaining to textile industry. | | | | | | | | | | K2 | |
| 2 | | | Analyze the eco standards pertaining to fabric and apparel. | | | | | | | | | | K4 | |
| 3 | | | Apply quality management in apparel industry. | | | | | | | | | | K3 | |
| 4 | | | Evaluate eco-parameters of textile materials. | | | | | | | | | | K5 | |
| 5 | | | Analyze inspection and pollution control in apparel industry. | | | | | | | | | | K5 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** – Create | | | | | | | | | | | | | | |
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| **Unit:1** | | | | | **Quality Standards** | | | | | **12 hours** | | | | |
| Introduction to quality standards, importance, benefits, levels and sources of quality standards. ISO Standards for the Apparel Industry - ISO 9000 & ISO 14000 standards, OEKO Tex 100 standard, Made in Green, STeP, GOTS standards, ANSI standards, Textile Exchange standards, Cradle to Cradle certified standards. | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Eco Parameter Testing** | | | | **12 hours** | | | | | |
| Sensitizing dye stuffs, allergic dyes, carcinogenic amines, red-listed chemicals as per Eco specifications. Dry cleaning Agents, Ozone depleting chemicals, pH value, formaldehyde content, heavy metal content, Pesticides and herbicides, azo dye stuffs, Diperse dyes, Nickel, Pentachlorol phenols, colour fasteners, brighteners, softening agents. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Quality Implementation System** | | **10 hours** | | | | | | | |
| SA8000 Standard, 5S, TQM, Lean manufacturing, Six Sigma lean manufacturing, The Higg Index by Sustainable Apparel Coalition (SAC), Product Life cycle management. | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Inspection in Apparel Industry** | | **12 hours** | | | | | | | |
| Garment defects - cutting defects, sewing defects, assembly defects, pressing, finishing and packaging defects.  Inspection procedures -raw materials, in process, and final inspection. Quality control in final Inspection – AQL: Levels 1.5, 2.5, 4.0, 6.5.  Cost of Quality (CoQ) and customer returns. | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Pollution Control** | | | **12 hours** | | | | | | |
| Hazardous chemicals, 11 flagship chemicals, Substances of very high concern (SVHC), Restricted Substances List (RSL), Manufacturing Restricted Substances List (MRSL). Zero Liquid Discharge (ZLD), Zero Discharge of Hazardous Chemicals (ZDHC), Detox Campaign. | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **02 hours** | | | | | | |
| 1. Learn industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
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| **Total Lecture hours** | | | | | | | | **60 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Managing Quality in Apparel Industry, Pradip V Mehta &SathishK.Bhardwaj, New AgeInternational, 1998. | | | | | | | | | | | | | |
| 2 | Sustainability in the Textile Industry- Chapter 5 Standards and Certificates, K.Amutha, SpringerPublication,2017. | | | | | | | | | | | | | |
| 3 | Sustainable Fibers and Textiles – Chapter 12 Sustainable Chemical Management and Zero Discharges, K.Amutha, Woodhead Publishing,2017. | | | | | | | | | | | | | |
| 4 | Eco-testing of Apparel Products, K.Amutha, Woodhead Publishing, Green Apparels Chapter 10,2019. | | | | | | | | | | | | | |
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| **Reference Book** | | | | | | | | | | | | | | |
| 1 | The Fundamentals of Quality Assurance in the Textile Industry, Stanley Bernard Brahams, CRC Press, 2016. | | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <https://nptel.ac.in/courses/116/102/116102019/> | | | | | | | | | | | | |
| 2 | | <https://www.iso.org/obp/ui/#iso:std:iso:14001:ed-3:v1:en> | | | | | | | | | | | | |
| 3 | | <https://www.iso.org/obp/ui/#iso:std:iso:9001:ed-5:v1:en> | | | | | | | | | | | | |
| 4 | | <https://youtu.be/_hs54V3x1VQ> | | | | | | | | | | | | |
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| **Course Designed By:**Dr.M.Sumithra | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | L | M | L | S | M | L | S | S | S |
| **CO2** | S | S | S | S | S | L | M | S | S | S |
| **CO3** | S | S | S | M | S | L | S | S | S | S |
| **CO4** | S | S | S | S | S | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S | M | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | **33B** | **TEXTILE INDUSTRY AND MANAGEMENT** | **L** | | | | | **T** | | **P** | **C** |
| **Elective** | | | | 4 | | | | | - | | - | 4 |
| **Pre-requisite** | | | | Basic knowledge about textile industry in India | **Syllabus Version** | | | | | | 2025 - 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Study about origin, growth, development and economical status of textile industry. 2. Learn about Government plans for technological developments in fibre and spinning industry for improving the economy. 3. Technical developments in garment industry | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | Understand origin, growth and development of textile industry with economy. | | | | | | | | | | | K2 | |
| 2 | Analyze government plans for technological developments in fibre and spinning industry in Indian economy. | | | | | | | | | | | K4 | |
| 3 | To Analyze the necessity of Indian textile associations | | | | | | | | | | | K4 | |
| 4 | Analyze technical developments through government policies. | | | | | | | | | | | K4 | |
| 5 | Analyze sales order using tally | | | | | | | | | | | K4 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | | |
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| **Unit:1** | | | **Textile Industry** | | | | | **12 hours** | | | | | |
| Origin, Growth and Development and economical status of Indian Textile Industry - Readymade garments.Technological developments in Fiber, Yarn and Fabric Industry for improving the economy, Significance and uses. | | | | | | | | | | | | | |
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| **Unit:2** | | | **Textile Economics** | | | | **12 hours** | | | | | | |
| Five year plans for the textile Industry - Recent plan and previous 5 Five year plans- Role of Textile Industry in Indian economy - Concept of GATT, MFA, WTO, AlC, Globalization& its impacts. | | | | | | | | | | | | | |
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| **Unit:3** | | | **Textile Associations & Organizations** | | | | | | **12 hours** | | | | |
| Indian textile associations, SIMA, SITRA, SISPA, South Indian Spinners Association, Association of Man - Made Fiber Industry of India, Association of Synthetic Fiber Industry, Indian Spinners' Association, All India Texturisers' Association, National Textile Corporation Ltd, Confederation of Indian Textile Industry (CITI), The Cotton Corporation of India Ltd, The Clothing Manufacturers Association of India, Textile Machinery Manufacturers' Association (India), Indian Textile Accessories & Machinery Manufacturers' Association (ITAMMA), Federation of All India Textile Manufacturers Association (FAITMA), Federation of Indian Export Organization. | | | | | | | | | | | | | |
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| **Unit:4** | | **Government Policies and Startups** | | | | **12 hours** | | | | | | | |
| Government policies for textile industries. Institutional support to entrepreneurs - Need for support - NSIC, NIESUBD, NEBD, PMEGP, SIDO, SSIDC, SISI, SFC, DIC, TCO, TIIC, Kadhi and Village Industries Commission (KVIC), Industrial Estates. Five Government Schemes for Retail Businesses-**Raw Material Assistance, Infrastructure Development Scheme, MUDRA Loans. Developing Training & Plug and Play Infrastructure - Start-up Warehouse, Mobile Application Centre, United Nation Technology & Innovation Lab (UNTIL). IoT Centre: Entrepreneurs’ Centre (Plug & Play Infrastructure).** Incubation Centers-Common Working Space, Test and demonstration facilities, Mediation & Network, Training & Coaching, Business Support. | | | | | | | | | | | | | |
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| **Unit:5** | | **Industry Management and Accounting** | | | | **10 hours** | | | | | | | |
| Inventory Management Techniques: Process and Tools-Sales Management-Aspects of Sales Management, Manage Sales with Tally. ERP 9, Sales order processing in Tally. ERP 9 – A efficient sales management tool-sales order, To enable sales order processing in Tally, Components of sales order report -**Stock Group, Stock Item, Group Summary, All Orders.** | | | | | | | | | | | | | |
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| **Unit:6** | | **Contemporary Issues** | | | | **02 hours** | | | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | **60 hours** | | | | | | | |
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| **Text Books** | | | | | | | | | | | | | |
| **1** | An Introduction to Textile Economics, Benjamin Woolf Hirsh, Peter Ellis, Textile Trade Press, 1973. | | | | | | | | | | | | |
| **2** | Official guide to financial accounting using Tally ERP 9 with GST, Tally education pvt ltd, 2018. | | | | | | | | | | | | |
| **3** | Tally ACE, Tally education Pvt Ltd, 2019. | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | |
| **1** | Textiles-Fiber to fabric, Bernard P Corbman, 6th edition, McGrawHill Book Co, Singapore, 1983. | | | | | | | | | | | | |
| **2** | Tally GURU Vol.2, Tally education pvt ltd, 2019. | | | | | | | | | | | | |
| **3** | Startup India: Policies abound but limited impact on ground, Anu Thomas ,ET online, 2017 | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | |
| 1 | Indian Textile Journal- Business Press P. Ltd, Maker Tower B-18 floor,Cuff parade, Mumbai-400009 | | | | | | | | | | | | |
| 2 | Textile Magazine, Magazine House, 710Mount Road, Chennai | | | | | | | | | | | | |
| 3 | Textile trends, East land Publications Pvt. Ltd, 44Chittranjan Avenue, Calcutta-12. | | | | | | | | | | | | |
| 4 | Hosiery and Textile Journal-International Magazine Home-164Modi Street, Fort, Mumbai | | | | | | | | | | | | |
| **Course Designed By:**Dr.M.Jayakumari | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | M | S | S | S | S | S |
| **CO2** | S | S | S | S | M | M | M | M | M | M |
| **CO3** | M | M | M | S | S | S | S | S | S | S |
| **CO4** | S | S | S | S | S | M | M | S | M | S |
| **CO5** | M | M | M | M | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **33C** | **ECO-TEXTILES AND SUSTAINABILITY** | **L** | **T** | | **P** | | **C** | |
| **Core** | | | | | 4 | - | | - | | 4 | |
| **Pre-requisite** | | | | | Basic knowledge of Textiles and Apparel | **Syllabus Version** | | 2025 – 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | |
| The main objectives of this course are to:   1. Understand about Eco textiles and its importance. 2. Explain the types of Ecology and structure of Eco system. 3. Gain knowledge about natural fibers, dyes and finishes. 4. Learn about Eco testing and eco standards. | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | |
| 1 | | | Understand the importance of Ecology and Structure of Eco system | | | | | | | K2 | |
| 2 | | | Apply various technique to extract the natural fibers for making eco textiles | | | | | | | K3 | |
| 3 | | | Extract and apply natural dyes and finishes for eco textiles | | | | | | | K6 | |
| 4 | | | Gain knowledge on Eco testing and Eco standards | | | | | | | K2 | |
| 5 | | | Gain knowledge on Sustainability concepts | | | | | | | K2 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Unit:1** | | | | **Eco-Textiles and Standards** | | **12 hours** | | | | | |
| Introduction & needs for eco-textiles & its importance. Ecology - Production ecology, Human ecology & Disposal ecology**.** Structure and stability of the ecosystem. Eco design, Eco label, Eco mark, Green, consumer. Eco-Auditing, Eco-brands. Toxicology of textile dyes. Characterization techniques suitable for textiles. Eco Standards for Textiles. | | | | | | | | | | | |
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| **Unit: 2** | | | | **Sustainable Textiles and fashion** | | **13 hours** | | | | | |
| Sustainability, SDG goals, Sustainable Textiles, Sustainable clothing, Sustainable Fashion – definition, meaning and significance; Environmental concerns related to fashion; Linear fashion and circular fashion. Moving towards sustainable fashion–Eco fashion, Green washing, Zero waste designing, upcycling & recycling, Slow fashion & fast fashion. 4R’s in sustainability-Repair, Recycle, Reuse and Reduce. Circular economy and sustainable design solutions. Corporate Social Responsibility in the textile and clothing sector. | | | | | | | | | | | |
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| **Unit:3** | | | | **Natural Fibers** | | **10 hours** | | | | | |
| Importance of natural fibers in textiles - Major fibers used in textiles - cotton, jute, linen and silk. Minor fibers used in textiles - sisal, pineapple, coir, nettle. Protein - soya, spider silk etc., **Extraction or preparation methods of natural fiber-retting, & its methods, decortications by hand and machine.** Recent findings of natural fibers in textile industry. | | | | | | | | | | | |
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| **Unit:4** | | | | **Natural Dyes** | | **13 hours** | | | | | |
| History, importance. Types of Natural dyes- plant, animals and minerals- madder, indigo, catechu, myrobalan, pomegranate, lac, alum, **Dye extraction methods & application methods. Mordants, Mordanting types, pre, meta and post mordanting.** Characteristics of natural dyed fabrics. Commercially available natural dyes, recent development in Natural dyes. | | | | | | | | | | | |
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| **Unit:5** | | | | **Natural Finishes** | | **10 hours** | | | | | |
| Need for natural finishes. Traditional plants & herbs used in natural finishing. Various plant Components, **Plant extraction methods and application**. Recent natural finishes on textiles for various applications. Process adopted for eco-friendliness. Enzyme technology, Foam technology, Super critical carbon-di-oxide dyeing & Plasma technology – Glow-discharge method, Corona discharge, Method& Dielectric barrier discharge method. | | | | | | | | | | | |
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| **Unit:6** | | | | **Contemporary Issues** | | **02 hours** | | | | | |
| 1. Learn industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | **60 hours** | | | | | |
| **Text Books** | | | | | | | | | | | |
| 1 | Eco Textiles and Sustainability, K.Sangeetha, Laser Park Publishing House, 2017 | | | | | | | | | | |
| 2 | Sustainable Textiles: Life Cycle and Environmental Impact, Richard Blackburn, Wood head Pub.Ltd., 2009 | | | | | | | | | | |
| 3 | Eco Textiles, Miraftab M. and Horrocks R., Wood head Pub.Ltd, Cambridge, 2007 | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | |
| 1 | Biobased Products and Industries, Charis M. Galanakis, Elsevier, 2020 | | | | | | | | | | |
| 2 | The Impact and Prospects of Green Chemistry For Textile, Shahid UI-Islam, Bhupendra Singh Butola, Elsevier, 2018 | | | | | | | | | | |
| 3 | Environmental Aspects of Textile Dyeing, Christier.M., Woodhead Pub. Ltd, Cambridge, 2007 | | | | | | | | | | |
| 4 | Bio-Textiles as Medical Implants, M W King, B S Gupta, Rguidoin, Woodhead Publishing, 2013 | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | |
| 1 | | Textile Fibers<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827> | | | | | | | | | |
| 2 | | Natural Fibers<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827> | | | | | | | | | |
| 3 | | Natural Dyes and Mordents <https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827> | | | | | | | | | |
| 4 | | Textile Finishing <https://nptel.ac.in/courses/116102054/> | | | | | | | | | |
| 5 | | Standards and Specifications, Eco Standards https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827 | | | | | | | | | |
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| **Course Designed By:**Dr.K.Sangeetha | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | M | M | M | L | M | S | L | L | M |
| **CO2** | M | S | L | M | L | M | S | L | L | M |
| **CO3** | M | M | S | M | L | M | S | L | L | M |
| **CO4** | S | M | M | M | L | M | S | L | L | M |
| **CO5** | S | M | M | M | L | M | S | L | L | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **3EA** | **CLOTHING CARE AND MAINTENANCE** | **L** | | **T** | | | | | **P** | | **C** |
| **Elective** | | | | | 4 | | - | | | | | - | | 4 |
| **Pre-requisite** | | | | | Basic knowledge about textile materials and their properties | **Syllabus Version** | | | | | | 2025 - 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. To learn about the maintenance of clothing and stain removal 2. To understand the care labels and packing 3. To explore sustainable clothing care | | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | |
| 1 | | | Gain knowledge about clothing care | | | | | | | | | | | K2 | |
| 2 | | | Know about various process in maintenance of clothing | | | | | | | | | | | K3 | |
| 3 | | | Evaluating the best method for clothing maintenance | | | | | | | | | | | K5 | |
| 4 | | | Create sustainable method for caring the wardrobe | | | | | | | | | | | K6 | |
| 5 | | | Study about the packing of textiles | | | | | | | | | | | K2 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Unit:1** | | | | **Introduction to Clothing Care** | | | | | | | **12 hours** | | | | |
| Need for clothing care, importance of fabric quality maintenance and durability after clothing care  Types of water: soft and hard water. Types of hardness: temporary and permanent; measurement of water hardness (ppm); TDS levels and water quality. Softening of hard water- Sodium carbonate method & ion exchange method.  Soaps, detergents: types, properties, applications.  Dry cleaning agents: solvents and other chemicals.  Stiffening agents (starch), optical brightening agents (OBA), Fabric conditioners.  Components used in detergents and its functions | | | | | | | | | | | | | | | |
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| **Unit:2** | | | | **Laundering Vs. Dry Cleaning, Stain Removal** | | | | | | **15 hours** | | | | | |
| Laundering (wet cleaning): objectives, methods, laundering of white and coloured textiles, laundering of cotton, silk, wool, synthetic fabrics, lace materials, carpets.  Washing machines: top and front loading, semi-automatic and fully automatic machines.  Dry cleaning: method, commercial dry cleaning, working principles.  Drying: outdoor (line and flat dry) and indoor (tumble dryer) drying.  Stain: classification, removal of known and unknown stains, removal of fresh and old stains. Stain removers, grease solvents, absorbents, washing soda and borax. | | | | | | | | | | | | | | | |
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| **Unit:3** | | | | **Ironing and Packing** | | | **11 hours** | | | | | | | | |
| Ironing and pressing: hot air, steam, permanent pressing. Domestic vs. commercial ironing.  Clothing storage: mending, darning, seasonal care.  Packing: importance, types, packing materials, sustainable packing materials. | | | | | | | | | | | | | | | |
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| **Unit:4** | | | | **Care Labels** | | | **10 hours** | | | | | | | | |
| GINETEX – Care symbols under ISO 3758:2023; clevercare.info initiative by GINETEX.  Care labels: importance, symbols, uses. International Care Labelling System, The Japanese Care Labelling System, The Canadian Care Labelling System, The European Care Labelling System, The American Care Labelling System | | | | | | | | | | | | | | | |
| **Unit:5** | | | | **Sustainable Clothing Care** | | | | | | | **10 hours** | | | | |
| Green cleaning: ozone laundering, ultrasonic cleaning.  Eco-friendly detergents and chemicals for sustainable clothing care.  Hand vs. machine wash, wash cycles in washing machines, energy efficiency of washing machines and dryers.  Six easy day-to-day habits for a sustainable laundry.  Water and carbon footprint of clothing care. | | | | | | | | | | | | | | | |
| **Unit:6** | | | | **Contemporary Issues** | | **2 hours** | | | | | | | | | |
| 1. Learn industry related terminologies 2. Expert lectures, online seminars - webinars | | | | | | | | | | | | | | | |
|  | | | | **Total Lecture hours** | | | | | **60 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | | | | |
| 1 | Care and Maintenance of Textile Products Including Apparel and Protective Clothing [RajkishoreNayak](https://www.amazon.in/s/ref=dp_byline_sr_ebooks_1?ie=UTF8&field-author=Rajkishore+Nayak&text=Rajkishore+Nayak&sort=relevancerank&search-alias=digital-text) , [Saminathan Ratnapandian](https://www.amazon.in/s/ref=dp_byline_sr_ebooks_2?ie=UTF8&field-author=Saminathan+Ratnapandian&text=Saminathan+Ratnapandian&sort=relevancerank&search-alias=digital-text), Textile Institute Professional Publications, 2018 | | | | | | | | | | | | | | |
| 2 | Household Textile & Laundry Work, [Durga Deulkar](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Durga+Deulkar&search-alias=stripbooks), 2011 | | | | | | | | | | | | | | |
| 3 | Fundamentals of Textiles and their Care, [Dantyagi](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Dantyagi&search-alias=stripbooks), 1996 | | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | | |
| 1 | How to Take Care of Your Clothes: Advice from the Ancestors, [Claire Leavey](https://www.amazon.in/s/ref=dp_byline_sr_book_1?ie=UTF8&field-author=Claire+Leavey&search-alias=stripbooks) Edited and Updated for Modern Living (Retro Metro Technobooks) – Import, 2012 | | | | | | | | | | | | | | |
| 2 | Field Guide to Stains: How to Identify and Remove Virtually Every Stain Known to Man Book by Melissa Wagner, Nancy Armstrong, and Virginia M. Friedman, 2002 | | | | | | | | | | | | | | |
| 3 | Laundry: The Home Comforts Book of Caring for Clothes and Linens, Cheryl Mendelson , 2010 | | | | | | | | | | | | | | |
| 4 | Care Labelling in Garments, R.Senthilkumar, 2016 | | | | | | | | | | | | | | |
| 5 | Textiles and their care, Anuradha Sharma, 2010 | | | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | |
| 1 | | Chemical Technology I – Web Course - https://nptel.ac.in/courses/103/107/103107082/ | | | | | | | | | | | | | |
| 2 | | Water Supply Engineering https://nptel.ac.in/courses/105/105/105105201/ | | | | | | | | | | | | | |
| 3 | | www.ginetex.net | | | | | | | | | | | | | |
| 4 | | www.clevercare.info | | | | | | | | | | | | | |
| **Course Designed By:** Dr.K.Amutha | | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | M | M | L | S | M | L | L |
| **CO2** | S | S | S | M | M | M | S | M | L | L |
| **CO3** | S | S | S | S | L | M | M | M | M | M |
| **CO4** | S | S | S | S | L | L | M | L | L | L |
| **CO5** | S | S | S | S | L | S | M | M | M | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **3EB** | | **CLOTHING APPEARANCE AND FIT** | **L** | | | | | **T** | **P** | **C** |
| **Core** | | | | | | | 4 | | | | | - | - | 4 |
| **Pre-requisite** | | | | | | | Basic Knowledge about clothing and fit | **Syllabus Version** | | | | | 2025 - 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about perceptions of body appearance and its relations to clothing 2. Understand the Assessment of clothing appearance and fit. 3. Know about the concepts of Virtual reality,3D Body scanning, Sizing systems 4. Recognize the need and the ability to understand cosmetic textiles 5. Understand Human Anthropometrics, Impact of physical appearances, rejuvenating the fashion and clothing curriculum | | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | |
| 1 | | | | Understand the Perceptions of body appearance and its relations to clothing | | | | | | | | | | K2 | |
| 2 | | | | Apply the concepts of assessment of clothing appearance and fit, Virtual Reality,3D Body scanning, Sizing systems | | | | | | | | | | K3 | |
| 3 | | | | Evaluate the principles of cosmetic textiles in textile industry. | | | | | | | | | | K5 | |
| 4 | | | | Analyse the Human Anthropometrics and systems | | | | | | | | | | K3 | |
| 5 | | | | Create the Impact of physical Appearance on attributions of specific traits | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Unit:1** | | | | | | **Perception of Body Appearance and its Relation to Clothing** | | | | | | **10 hours** | | | |
| Introduction – Beauty - Facial attractiveness, body physical attractiveness, body image, modification of body appearance by dressing, fabric properties related to clothing appearance & fit. | | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | | **Assessment of Clothing Appearance** | | | | | **12 hours** | | | | |
| Introduction - Assessment of fabric surface smoothness, seam appearance, crease retention, appearance retention of finished garments, and reliability of subjective assessment. Objective evaluation of fabric wrinkling, fabric pilling, seam pucker, overall garment appearance | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Unit:3** | | | | | | **Assessment of Clothing Fit** | | | | **12 hours** | | | | | |
| Definition of fit - Influences on clothing fit, testing methods for dimensional fit, subject rating scales, subjective fitting guide, Virtual reality – Body clothes trial. **3-d Body Scanning** – Introduction - global development of body scanners, principles and operations of body scanning technologies, bench marking. Challenges of 3D body scanning. Garment drape - measurement of fabricdrape. | | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | | **Textiles and Cosmetics** | | | | **12 hours** | | | | | |
| Cosmetic Textile & Development of cosmetic textiles using microencapsulation technology-air suspension coating-pan coating-emulsion hardening process-cosmetic textile products- advantages and disadvantages**.** | | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | | **Appearance Management Through Clothing** | | | **12 hours** | | | | | | |
| Human Anthropometrics and Sizing Systems- Terms and definitions - Traditional anthropometry, Historical development of sizing system. Impact of physical appearance on attributions of specific traits –Body languages and clothes for presentations –Rejuvenating the fashion and clothing curriculum. | | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | | **Contemporary Issues** | | | **02 hours** | | | | | | |
| 1. Learn industry related terminologies 2. Expert lectures, online seminars - webinars | | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | | | **60 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | | | | |
| 1 | | Clothing Appearance and Fit Science and Technology, J.Fan, W.Yu and Hunter, Woodhead, 2004 | | | | | | | | | | | | | |
| 2 | | Functional Textiles for Improved Performance Protection and Health, N.Pan and G.Sun, Woodhead, 2011 | | | | | | | | | | | | | |
| 3 | | Anthropometry Apparel Sizing and Design, Deepti Gupta and NorsaadahZakaria, Woodhead, 2014 | | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | | | |
| 1 | | Fashioning Models: Image, Text and Industry, Joanne Entwistle and Elizabeth Wissinger, Bery in an Imprint Bloomsbury, 2012 | | | | | | | | | | | | | |
| 2 | | Body Language, Allan Pease, Manjul Publishing House, 2014. | | | | | | | | | | | | | |
| 3 | | Fabric Testing, Jinlian Hu,Woodhead,2008 | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | |
| 1 | | | <https://swayam.gov.in/nd1_noc19_te08/preview> | | | | | | | | | | | | |
| 2 | | | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/145> | | | | | | | | | | | | |
| 3 | | | <http://vr.cs.uiuc.edu/vrbook.pdf> | | | | | | | | | | | | |
| 4 | | | [https://www.fiber2fashion.com/industry-article/877/e-fit-the-latest-technology-for-perfect-fit](https://www.fibre2fashion.com/industry-article/877/e-fit-the-latest-technology-for-perfect-fit) | | | | | | | | | | | | |
| 5 | | | <https://pciaw.org/covid-19/pciaw-sizing-wardrobe-management-webinar-in-partnership-with-gerber-technology-update/> | | | | | | | | | | | | |
| 6 | | | <https://www.academia.edu/36250951/CLOTHING_FIT_AND_COMFORT_ppt> | | | | | | | | | | | | |
| 7 | | | <https://www.slideshare.net/amandeepsarao/appearance-grooming> | | | | | | | | | | | | |
| 8 | | | <https://www.slideserve.com/arne/dress-and-appearance> | | | | | | | | | | | | |
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| **Course Designed By:**Dr.M.Jayakumari | | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **COs** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | M | M | M | S | M | S | S | S |
| **CO2** | M | S | S | S | S | S | M | S | S | M |
| **CO3** | S | S | S | S | S | M | S | S | S | S |
| **CO4** | M | S | M | M | S | S | S | S | S | S |
| CO5 | S | S | S | S | S | M | S | S | S | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **3EC** | **NANOTECHNOLOGY IN TEXTILES** | **L** | **T** | | | | **P** | **C** |
| **Elective** | | | | | 4 | - | | | | - | 4 |
| **Pre-requisite** | | | | | Any science degree | **Syllabus Version** | | 2025 - 2026 | | | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objective of this course is to:   1. Provide an insight about the basics of nanotechnology and to guide the students to apply nanotechnology techniques in various textile applications. | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | Remember the basics of Nanoscience, and textile structures and its applications in textiles. | | | | | | | | | | K1 | |
| 2 | Understand the technological production of nanofibers. | | | | | | | | | | K2 | |
| 3 | Apply the knowledge of Nano particles , Carbon Nanotubes and Nano Composites for various Textiles end use | | | | | | | | | | K3 | |
| 4 | Get familiarized with the new concepts of Nanocoatings and Surface Modification Techniques | | | | | | | | | | K4 | |
| 5 | Evaluate and create nano based textile products for various applications | | | | | | | | | | K5&K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | |
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| **Unit:1** | | | | **Nanoscience, and Textile Structures** | | | | | | | **12hours** | |
| **Nanoscience** –Introduction-evolution of nanotechnology-history of nanomaterials-definition of nanomaterials – one, two and three dimensional nanomaterials – Natural nanomaterials  **Synthesis of nanomaterials:** Top-down and bottom-up approaches – “green” synthesis of nanoparticles. **Properties:** Size dependent properties. | | | | | | | | | | | | |
| **Unit:2** | | | | **Nano fibre Production and Properties** | | | | | | | **12hours** | |
| **Electrospinning** – Working Principle – Instrumentation - Parameters - types of electrospinning – Multi-jets from single needle**,** Multi-jets from multiple needles, Multi-jets from needleless systems  **Potential approaches** - Bubble electrospinning – Electro blowing - Electrospinning by porous hollow tube- Electrospinning by microfluidic manifold- Roller electrospinning- Melt electrospinning  Electro conductive, antistatic, Anti-bacterial and anti-microbial, self- sterilizing Durable/ Anticorrosive, Moisture absorbent, Self- cleaning/ dirt and water repellent, UV protective, Fireproof and Flame retardant, Nano-filtration, Fragrence and odor control, Stain Resistive, Improved tensile strength. | | | | | | | | | | | | |
| **Unit:3** | | | | **Nano particles , Carbon Nanotubes and Nano composites in Textiles** | | | | | | **12 hours** | | |
| **Nano particles** - Preparation of nano-sized materials- Vapour phase reaction- commercially nano-particles- metals and metal oxides nano-particles- polymer and polymer nano-composites- Clay nano-particles, carbon nano particles-polymer nano-whiskers.  **Nano-particles in functional textile finishing**- Wrinkle resistance- stain resistance- water repellency-anti-static performance- anti-bacterial effect- ultra violet protection.  **Carbon nanotubes:** structure and properties- synthesis**-** electric arc discharge- laser ablation method- chemical vapor deposition- nanotube purification-applications of carbon nanotubes in textile and its related products.  **Nano-composites:** Classification of nanocomposites- Non-polymer based nanocomposites, polymer based nanocomposites. | | | | | | | | | | | | |
| **Unit:4** | | | | **Nanocoatings and Surface Modification Techniques** | | | | | **12 hours** | | | |
| **Introduction to Nanocoatings**: Importance of nanocoatings- finding the perfect solvent, applications of nanocoatings.  **Abrasion & wear resistant Nanocoatings** -Thermal barrier and flame retardant Nanocoatings-Anti-microbial Nanocoatings: Thermal barrier and flame retardant Nanocoatings**.** | | | | | | | | | | | | |
| **Unit:5** | | | | **Nanomaterials for Textiles and Cosmetics Applications** | | | | | **10 hours** | | | |
| **Textiles -** Nano-filled polypropylene fibers -Bionics- Swim-suits with shark-skin-effect, Soil repellence, Lotus effect – Nano finishing in textiles (UV resistant, antibacterial, hydrophilic, self-cleaning, flame retardant finishes) -Modern textiles; Lightweight bulletproof vests and shirts, Color changing property, Waterproof and Germ proof, Cleaner kids clothes, wrinkle free, Wired and Ready to Wear. Military textiles  **Cosmetics** – Formulation of Gels, Shampoos, Hair-conditioners (Micellar self-assembly and its manipulation) -Sun-screen dispersions for UV protection using Titanium oxide – Color cosmetics | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Unit:6** | | | | **Contemporary Issues** | | | | | | **02 hours** | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars – webinars | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | | | | **60 hours** | | |
| **Text Books** | | | | | | | | | | | | |
| 1 | | Brown, P.J., Stevens, K.: Nanofibers and Nanotechnology in Textiles. Woodhead Publishing Limited, Cambridge, 2007 | | | | | | | | | | |
| 2. | | Ramakrishna, S., Fujihara, K., Teo, W.E., Lim, T.C., Ma, Z.: Electrospinning and Nanofibers. World Scientific Printers, Singapore, 2005 | | | | | | | | | | |
| 3. | | Alfred Ruiden, Elements of Polymer Science and Engineering, Elsevier Science, 1998. | | | | | | | | | | |
| 4. | | Mahltig B.,Textor T., “Nanosols& textiles”, World scientificpublishers, 2012 | | | | | | | | | | |
|  | |  | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | |
| 1. | | Nanocomposites - New Trends And Developments Edited by FarzadEbrahimi,  Published by InTech, 2012 | | | | | | | | | | |
| 2. | | Mai Y-W., “Polymer Nano composites”, Wood head publishing, 2006 | | | | | | | | | | |
| 3. | | See ram Ramakrishna, “An introduction to electro spinning and Nanofibers”, World Scientific Publishing Co, 2005 | | | | | | | | | | |
| 4. | | Chang W.N., “Nanofiber fabrication, performance and applications”, Nova Science, 2009 | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | |
| 1 | | | https://www.coursera.org/learn/nanotechnology | | | | | | | | | |
| 2 | | | https://www.udemy.com/course/nanotechnology/ | | | | | | | | | |
| 3 | | | https://textilecourse.blogspot.com/2020/01/application-nanotechnology-textile.html | | | | | | | | | |
| 4. | | | https://www.my-mooc.com/en/categorie/nanotechnology | | | | | | | | | |
| 5. | | | https://technicaltextile.net/articles/nano-textiles-2968 | | | | | | | | | |
| 6. | | | [www.nanophase.com](http://www.nanophase.com) | | | | | | | | | |
| 7. | | | [www.ccmr.comell.edu](http://www.ccmr.comell.edu/) | | | | | | | | | |
| 8. | | | [www.nanotex.com](http://www.nanotex.com/) | | | | | | | | | |
| 9. | | | [www.azonano.com](http://www.azonano.com/) | | | | | | | | | |
| 10. | | | [www.nQl.co.uk](http://www.nql.co.uk/) | | | | | | | | | |
| 11. | | | https://www.nanowerk.com/spotlight/spotid=19451.php | | | | | | | | | |
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| **Course Designed By:**Dr.S.Grace Annapoorani | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | S | L | S |
| **CO2** | S | M | M | S | M | M | M | S | L | S |
| **CO3** | S | M | M | M | S | M | M | L | L | S |
| **CO4** | S | M | S | M | M | M | M | L | L | S |
| **CO5** | S | M | S | S | S | S | S | S | L | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | **3ED** | | **TECHNICAL TEXTILES - 3** | **L** | | **T** | | | | **P** | | **C** |
| **Elective** | | | | | 4 | | - | | | | - | | 4 |
| **Pre-requisite** | | | | | Basic knowledge about Textile science | **Syllabus Version** | | | | | 2025 - 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about the production methods used for the Technical Textiles. 2. Learn in detail about the functions and properties of Technical Textiles. 3. Learn about the applications and latest developments in Technical Textiles. | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | Understand about oekotextiles for various applications | | | | | | | | | | | K2 | |
| 2 | | Understand about packaging textiles for various applications | | | | | | | | | | | K2 | |
| 3 | | Understand about protective textiles for various applications | | | | | | | | | | | K2 | |
| 4 | | Understand about sports textiles for various applications | | | | | | | | | | | K2 | |
| 5 | | Design technical textile products for various applications | | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | |
|  | | | |  | | | | | |  | | | | |
| **Unit:1** | | | | **Oeko Textiles** | | | | | | **10 hours** | | | | |
| **Environment friendly textiles:** Introduction, fibers used Types, functions and properties, Characteristics and Applications - Environmental engineering and landfill waste management, secondary protection in chemical/oil industries | | | | | | | | | | | | | | |
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| **Unit:2** | | | | **Packaging Textiles** | | | | | **12 hours** | | | | | |
| **Packaging textiles:** Introduction, fibers used Types, functions and properties, Characteristics and Applications – leno bags, wrapping fabric, jute hessian and sacks, soft luggage products, tea bag filter paper, woven sacks. | | | | | | | | | | | | | | |
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| **Unit:3** | | | | **Protective Textiles** | | **12 hours** | | | | | | | | |
| **Protective Textiles:** Introduction, fibers used Types, functions and properties, Characteristics and Applications Fire Protective clothing, Heat – resistant garments, Water proof materials, Ballistic resistant Vests, Biological and chemical Vests, Military Protective clothing. Smart polymers used in Protective clothing. Recent developments in protective textiles. | | | | | | | | | | | | | | |
| **Unit:4** | | | | **Sports Textiles** | | **12 hours** | | | | | | | | |
| **Sports Textiles:** Introduction, fibers used, Types, functions and properties, Characteristics and Applications of Sports Tech. Applications and latest trends in Sports Tech. | | | | | | | | | | | | | | |
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| **Unit:5** | | | | **Product Development** | | **12 hours** | | | | | | | | |
| Product development in Oekotech, Packtech, Protech and Sporttech. | | | | | | | | | | | | | | |
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| **Unit:6** | | | | **Contemporary Issues** | | **02 hours** | | | | | | | | |
| 1. Learn Industry related terminologies 2. Expert lectures, online seminars - webinars | | | | | | | | | | | | | | |
| **Total Lecture Hours** | | | | | | | **60 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Hand book of Technical textiles, A. R. Horrocks and S. C. Anand, Wood head publishing ltd, England, 2000 | | | | | | | | | | | | | |
| 2 | Technical Textiles and its Application , Dr.S.Grace Annapoorani, LASER Park Publishing House, India, 2017 | | | | | | | | | | | | | |
| 3 | Textiles for Industrial Applications, R Senthil Kumar, CRC Press, 2013 | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | Textile Fibers: Developments and Innovations, Kothari, V., New Delhi: IAFL Publications, 2000. | | | | | | | | | | | | | |
| 2 | Handbook of Industrial Textiles, SabitAdanur, Wellington Sears CRC Press ,1995 | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/130> | | | | | | | | | | | | | |
| 2 | https://www.textile Learner blogspot.con | | | | | | | | | | | | | |
| 3 | <https://textilelearner.blogspot.com/2020/03/nfc-embedded-smart-textiles.html> | | | | | | | | | | | | | |
| 4 | <https://www.technical-textiles.net> | | | | | | | | | | | | | |
| 5 | <https://www.sciencedirect.com/topics/materials-science/smart-textiles> | | | | | | | | | | | | | |
| **Course Designed By:** Dr.K.Sangeetha | | | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | S | S | S | S | S | S | S | L | S |
| **CO2** | S | S | S | S | M | S | S | S | L | S |
| **CO3** | S | S | S | M | S | S | S | S | L | S |
| **CO4** | S | M | S | M | M | S | S | S | M | S |
| **CO5** | S | M | S | S | S | S | S | S | M | S |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **33P** | **Traditional Textiles of India** | **L** | | **T** | | **P** | | **C** |
| **Practical** | | | | | **-** | | **-** | | 4 | | 4 |
| **Pre-requisite** | | | | | Basic knowledge about | **Syllabus Version** | | | 2025 - 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are to:   1. To know the importance of traditional textiles, present in India 2. To identify the types of costumes worn in various parts of India 3. Acquire knowledge of history and heritage of textiles in India 4. To become aware of status of traditional textiles and its socio - economic | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | | | Acquire information in history and origin of contemporary embroideries of India | | | | | | | | K1 | |
| 2 | | | Understand the importance of handlooms, Khadi and its contribution to increase national economy | | | | | | | | K2 | |
| 3 | | | Know about various traditional textiles, prints and dyes of India and its identification | | | | | | | | K3 | |
| 4 | | | Identify the Dyed Textiles – History, process, applications and Design | | | | | | | | K4 | |
| 5 | | | Know about Printed Textiles | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | |
| **Traditional Textiles of India** | | | | | | | **75 hours** | | | | | |
| **1.Traditional Costumes of India-** North States – Kashmir, Punjab**,** South States – Tamilnadu, Kerala, Karnataka, Andhara Pradesh**,** East States – Assam, West Bengal**,** West States– Maharashtra  **2. Hand-Woven Textiles- Saris -** Banaras Brocades, Baluchari Saris, Jamdani Saris, Paithani Saris, Kanjeevaram Saris, Chanderi Saris, Maheshwari Saris.  **Shawls -** Kashmir Shawls, Kullu & Kinnaur Shawls, Wraps of North-east  **3. Origin of embroidery-** Kashida, Phulkari, Chamba Rumal, Embroidery from Gujarat, Parsi Embroidery, Chikankari, Phool Patti ka Kaam, Zardozi, Kasuti, Lambadi Embroidery, Kantha, Sujani, Pipli Applique  **4.Dyed Textiles- Bandhani -** Bandhani of Gujarat, **Bandhas** of Odisha, **Ikat** of Andhra Pradesh  **5.Printed Textiles - Bagru** prints from Rajasthan**, Sanganer** prints from Rajasthan**, Kalamkari** from Andhra Pradesh. | | | | | | | | | | | | |
| **Total hours** | | | | | | | **75 hours** | | | | | |
| **Text Books** | | | | | | | | | | | | |
| 1 | Carl Kohler, (2012), A History of Costume, Dover Publications, INC, New York | | | | | | | | | | | |
| 2 | Karolia, A. (2019), Traditional Indian Handcrafted Textiles: History, Techniques, Processes, Designs, Niyogi Books, India. | | | | | | | | | | | |
| 3 | Ritu Kumar (2008), Costumes and Textiles of Royal India, Antique Collectors Club | | | | | | | | | | | |
| 4 | Sankar K, Roy, (2008), Textile Traditions of Northeast India, Indira Gandhi Rashtriya Manav Sangrahalaya, Bopal and Orient Publishers, New Delhi. | | | | | | | | | | | |
| 5 | Shailaja, D. Naik (2012). Traditional Embroideries of India, APH Publiations, New Delhi. | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | |
| 1 | Daniel H, (1974), “Printing”, Hawlin Publishers Ltd., London | | | | | | | | | | | |
| 2 | Lyle.D.S, (1976, “Modern Textiles”, John Wiley & Sons, London | | | | | | | | | | | |
| 3 | Hall.A.J (1969), “The standard handbook of textiles”, Heywood books, London | | | | | | | | | | | |
| 4 | Chattopadhyay and Kamal Devi (1975): Handicraft of India, New Delhi, Indian Council of Cultural Relations | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | |
| 1 | | .https://ponycraftstore.com/blogs/traditional-embroidery-of-india/traditional-embroidery-of-  india | | | | | | | | | | |
| 2 | | https://www.slideshare.net/slideshow/traditional-embroideries-of-india-76836145/76836145 | | | | | | | | | | |
| 3 | | https://www.slideshare.net/NAGASUNDARISENTHILKU/embroideries-of-india-  195590999 | | | | | | | | | | |
| 4 | | https://www.youtube.com/watch?v=0qj2IScLrok | | | | | | | | | | |
| 5 | | https://onlinecourses.nptel.ac.in/noc23\_hs83/preview | | | | | | | | | | |
| **Course Designed By: Dr. M.Sumithra** | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | M | S | S | M | S | M | S | M | S | S |
| **CO2** | M | M | M | M | S | M | M | M | M | S |
| **CO3** | M | M | M | S | M | S | M | M | S | S |
| **CO4** | M | M | M | M | M | M | M | M | M | M |
| **CO5** | M | M | M | M | M | S | M | S | M | M |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **33Q** | **PORTFOLIO PRESENTATION AND VIVA VOCE** | **L** | **T** | | **P** | | **C** |
| **Core - Practical** | | | | | - | - | | 4 | | 4 |
| **Pre-requisite** | | | | | Basic knowledge in sketching and about theme selection | **Syllabus Version** | | | 2025-2026 | | |
| **Course Objectives:** | | | | | | | | | | | |
| The main objectives of this course are to:  1. Design and develop portfolio with sketches, Concept, Mood Boards on basis of theme. | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | |
| 1 | | Develop portfolio on par with the design /theme requirement | | | | | | | | K2 | |
| 2 | | Make a design collection by utilizing all designing and technical skills | | | | | | | | K3 | |
| 3 | | Create a portfolio for exhibiting the design collection in a creative manner. | | | | | | | | K6 | |
| 4 | | Develop various boards like theme board, mood board, story board, colour board, fabric swatch board, Pattern board and flat pattern | | | | | | | | K6 | |
| 5 | | Compile and present the portfolio effectively | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | |
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| **Portfolio Presentation** | | | | | | | | **75 hours** | | | |
| Portfolio Presentation for any 6 Theme with the following components (Woven / knitted fabric)  1. Name Board 2. Designer Profile 3. Customer Profile 4. Mood Board 5. Inspiration Board 6. Fashion Illustration – 5 (front &back sketches) 7. Colour Board 8. Fabric Board 9. Design Development / Story Board 10. Accessory Board 11. Garment Construction Board 12. Photo shoot collection board | | | | | | | | | | | |
| **Total hours** | | | | | | **75 hours** | | | | | |
| **Reference Book** | | | | | | | | | | | |
| 1 | Portfolio Presentation for Fashion Designers., [Linda Tain](https://www.bloomsbury.com/in/author/linda-tain), PDF –e BOOK | | | | | | | | | | |
| 2 | Portfolio Presentation for Fashion Designers Paperback, [LindaTain](https://www.amazon.in/Linda-Tain/e/B001K8MDTW/ref=dp_byline_cont_book_1) , Fairchild Publications2010 | | | | | | | | | | |
| 3 | Design Your Fashion Portfolio Paperback – 1 [Steven Faerm](https://www.amazon.in/Steven-Faerm/e/B0034Q1NJ4/ref=dp_byline_cont_book_1),A& C Black Publishers Ltd, 2012 | | | | | | | | | | |
|  | | | | | | | | | | | |
| **Related Online Content [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | |
| 1 | | | <https://www.bloomsbury.com/in/portfolio-presentation-for-fashion-designers-9781501322976/> | | | | | | | | |
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| **Course Designed By**: Dr.S.Grace Annapoorani | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | S | M | S | S | S | S | S | L | S | S |
| **CO2** | S | M | S | M | S | S | M | L | M | M |
| **CO3** | S | M | S | M | S | S | M | L | S | S |
| **CO4** | M | S | S | L | S | S | M | L | M | L |
| **CO5** | M | M | M | L | M | M | M | L | M | L |

\*S-Strong; M-Medium; L-Low

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| **Course code** | | | | **3GS17** | | **FASHION CONCEPTS** | **L** | | | **T** | | **P** | **C** |
| **Supportive** | | | | | | 4 | | | - | | - | 4 |
| **Pre-requisite** | | | | | | **Any UG Degree** | **Syllabus Version** | | | | | 2025 - 2026 | |
| **Course Objectives:** | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Understand and adapt the ethics of fashion 2. Design and apply the fashion techniques 3. Understand the colour harmony in fashion design 4. Create their designs based on the inspirations. 5. Evaluate the design created based on the principles of design. | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | | | Apply and exhibit the ethics of fashion | | | | | | | | | K3 | |
| 2 | | | Apply the fashion and designing techniques | | | | | | | | | K3 | |
| 3 | | | Analyse the colour harmony in fashion design | | | | | | | | | K3 | |
| 4 | | | Create garment designs based on the Elements of Design | | | | | | | | | K6 | |
| 5 | | | Evaluate Application of colour and Principles of design in dress | | | | | | | | | K5 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Unit:1** | | | | | **Fashion and Style** | | | | | | **5hours** | | |
| Definition –Fashion, style, fad and classic. Color chart-Prang colour chart, Value chart and Intensity chart | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Elements of Design** | | | | | **6 hours** | | | |
| Illustrate garment designs for the Elements of Design –Line, Colour, Texture, Shape or Form and Size | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Principles of Design** | | | | **6 hours** | | | | |
| Illustrate garment designs for the Principles of Design - Balance in dress, Harmony in dress, Emphasis in dress, Proportion in dress and Rhythm in dress | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Colour Harmony** | | | | **6 hours** | | | | |
| Illustrate the Colour Harmony in Dress Design -Monochromatic colour harmony, Analogous colour harmony, Complimentary colour harmony, Double Complimentary colour harmony, Split Complimentary colour harmony and Triad colour harmony | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Application of Colour and Principles of Design in Dress** | | | **5 hours** | | | | | |
| Application of colour and Principles of design in dress - Harmony through colour, Emphasis through colour, Proportion through colour, Rhythm through colour and Balance through colour. | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **2 hours** | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | | | |
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| **Total Lecture hours** | | | | | | | | **30 hours** | | | | | |
| **Text Books** | | | | | | | | | | | | | |
| 1 | Elements of Fashion and Apparel Design By, [G. J. Sumathi](https://www.google.co.in/search?tbo=p&amp;tbm=bks&amp;q=inauthor%3A%22G.%2BJ.%2BSumathi%22), New Age International, 2007 | | | | | | | | | | | | |
| 2 | Art in everyday life, Harriet Goldstein,Macmillan, 2007. | | | | | | | | | | | | |
| 3 | Fashion design, The art of style, Jen Jones, Capstone,2007. | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | |
| 1 | Costumes throughout the Ages, [Charlotte Chilton](https://www.harpersbazaar.com/author/220913/charlotte-chilton/), Feb 21, 2020. | | | | | | | | | | | | |
| 2 | History of Costume (World of culture), [Rachel H. Kemper](https://www.goodreads.com/author/show/1279446.Rachel_H_Kemper), News week, 1977. | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | |
| 1 | | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/145> | | | | | | | | | | | |
| 2 | | <https://onlinecourses.nptel.ac.in/noc20_hs81/preview> | | | | | | | | | | | |
| 3 | | <https://onlinecourses.nptel.ac.in/noc20_de01/preview> | | | | | | | | | | | |
| 4 | | <https://slideplayer.com/slide/1521307/> | | | | | | | | | | | |
| 5 | | <https://slideplayer.com/slide/1521626/> | | | | | | | | | | | |
| 6 | | <https://www.pinterest.ca/> | | | | | | | | | | | |
| 7 | | <https://www.slideshare.net/NanoMarkets/smart-textile-markets-20162023-slides> | | | | | | | | | | | |
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| **Course Designed By:**Dr.M.Jayakumari | | | | | | | | | | | | | |

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| ----23 – 886\* | **HEALTH & WELLNESS** | L | T | P | C\*\* |
|  |  | 0 | 0 | 2 | 1 |

\*(First four digits in the subject code branch code and Seventh digit is Semester)

\*\* Health & Wellness has one credit for the third semester only and it has no credits for other

semesters.

**Skill Areas:**

Physical Fitness, Nutrition, Mental Health, Awareness on Drug addiction and its effects

**Purpose:**

The Health & Wellness course focuses on teaching the elements of physical, mental, emotional, social, intellectual, environmental well-being which are\_ essential for overall development of an individual. The course also addresses the dangers of substance abuse and online risks to promote emotional and mental health.

**Learning Outcomes:**

Upon completion of the Health & Wellness course, students will be able to:

1. Demonstrate proficiency in sports training and physical fitness practices.

2. Improve their mental and emotional well-being, fostering a positive outlook on health and life.

3. Develop competence and commitment as professionals in the field of health and wellness.

4. Awareness on drug addiction and its ill effects

**Focus:**

During the conduct of the Health & Wellness course, the students will benefit from the following focus areas:

1. Stress Management.

2. Breaking Bad Habits

3. Improving Interpersonal Relationships.

4. Building Physical Strength & Inner Strength.

**Role of the Facilitator:**

The faculty plays a crucial role in effectively engaging with students and guiding them towards achieving learning outcomes. Faculty participation involves the following areas:

1. **Mentorship & Motivation**: The Facilitator mentors students in wellness and self-discipline while inspiring a positive outlook on health. Faculty teach stress management, fitness, and daily well-being.
2. **Promoting a Safe and Inclusive Environment**: The facilitator ensures a safe, inclusive, and respectful learning environment for active student participation and benefit
3. **Individualised Support and Monitoring Progress**: The facilitator plays a crucial role in providing personalized support, monitoring and guidance to students

**Guided Activities:**

In this course, several general guided activities have been suggested to facilitate the achievement of desired learning outcomes. They are as follows:

1. Introduction to Holistic Well-being.

2. Holistic Wellness Program- Nurturing Body and Mind

3. Breaking Bad Habits Workshop,

4. Improving the elements of physical, emotional, social, intellectual, environmental and mental well-being.

5. Creating situational awareness, digital awareness

6. Understanding substance abuse, consequences and the way out.

**Period Distribution**

The following are the guided activities suggested for this Audit course

The Physical Director should plan the activities by the students

Arrange the suitable Mentor / Guide for the wellness activities

Additional activities and programs can be planned for Health and Wellness.

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| **S.No.** | **Guided Activities** | **Period** |
| **1** | **Introduction to Holistic Wellbeing**  1. Introduce the core components of Health & Well-being namely Physical, mental and emotional wellbeing  2. Provide worksheets on all the four components individually and explain the inter connectedness to give an overall understanding. |  |
| **2** | **Wellness Wheel Exercise (Overall Analysis)**   * Guide students to assess their well-being in various life dimensions through exercises on various aspects of well-being, and explain the benefits of applying wellness wheel. * Introduce Tech Tools: * Explore the use of technology to support well-being. * Introduce students to apps for meditation, sleep tracking, or healthy recipe inspiration. |  |
| **3** | **Breaking Bad Habits (Overall Analysis)**   * Open a discussion on bad habits and their harmful effects * Provide a worksheet to the students to identify their personal bad habits. * Discuss the trigger, cause, consequence and solution with examples. * Guide them to replace the bad habits with good ones through worksheets. |  |
| **4** | **Physical Well-being**  **1. Fitness**  Introduce the different types of fitness activities such as basic exercises, cardiovascular exercises, strength training exercises, flexibility exercises, so on and so forth.  (Include theoretical explanations and outdoor activity).  **2. Nutrition**  Facilitate students to reflect on their eating habits, their body type, and to test their knowledge on nutrition, its sources and the benefits.  **3. Yoga & Meditation**  Discuss the benefits of Yoga and Meditation for one's overall health.  Demonstrate different yoga postures and their benefits on the body through visuals (pictures or videos)  **3.Brain Health**  Discuss the importance of brain health for daily life  Habits that affect brain health (irregular sleep, eating, screen time)  Habits that help for healthy brains (reading, proper sleep, exercises)  Benefits of breathing exercises and meditation for healthy lungs.  **5. Healthy Lungs**  Discuss the importance of lung health for daily life  Habits that affect lung health (smoking, lack of exercises).  Benefits of breathing exercises for healthy lungs  **6. Hygiene and Grooming**  Discuss the importance of hygienic habits for good oral, vision, hearing and skin health.  Discuss the positive effects of grooming on one's confidence level and professional growth.  **Suggested Activities (sample):**  **Nutrition:**  Invite a nutritionist to talk among the students on the importance of nutrition to the body or show similar videos shared by experts on social media. Organize a 'Stove less/fireless cooking competition for students where they are expected to prepare a nutritious dish and explain the nutritive values in parallel. |  |
| **5** | **Emotional Well-being**  **1.Stress Management**  Trigger a conversation or provide self-reflective worksheets to identify the stress factors in daily life and their impact on students performance.  Introduce different relaxation techniques like deep breathing, progressive muscle relaxation, or guided imagery.  (use audio recordings or visuals to guide them through these techniques).  After practicing the techniques, have them reflect on how these methods can help manage stress in daily life.  **2. Importance of saying ‘NO’**  Explain the students that saying 'NO' is important for their Physical and mental well-being, Academic Performance, Growth and Future, Confidence, Self-respect, Strong and Healthy Relationships, building reputation for self and their family (avoid earning a bad name).  Factors that prevent them from saying NO'  How to practice saying 'NO"  **3. Body Positivity and self-acceptance**  Discuss the following with the students.   * What is body positivity and self-acceptance? * Why is it important? * Be kind to yourself. * Understand that everyone's unique.   **Suggested Activities(Sample):**  (Importance of saying ‘NO’)  Provide worksheets to self-reflect on...  ... how they feel when others say ‘no’ to them  …the situations where they should say ‘no’  Challenge students to write a song or rap about the importance of saying no and how to do it effectively.  Students can perform their creations for the class. |  |
| **6** | **Social Well-Being**  **1. Practicing Gratitude**  Discuss the importance of practicing gratitude for building relationships with family, friends, relatives, mentors and colleagues. Discuss how one can show gratitude through words and deeds.  Explain how practicing gratitude can create ‘ripple effect’  **2. Cultivating Kindness and Compassion**  Define and differentiate between kindness and compassion  Explore practices that cultivate these positive emotions.  Self-Compassion as the Foundation.  The power of small gestures  Understanding another's perspective.  The fruits of compassion  **3. Practising Forgiveness**  Discuss the concept of forgiveness and its benefits.  Forgiveness: What is it? and What it isn't?  Benefits of forgiveness.  Finding forgiveness practices  **4. Celebrating Differences**  Appreciate the value of individual differences and foster inclusivity.  The World: A Tapestry of Differences (cultures, backgrounds, beliefs, abilities, and appearances).  Finding strength in differences (diverse perspectives and experiences lead to better problem-solving and innovation).  Celebrating differences, not ignoring them (respecting and appreciating the unique qualities).  Activities for celebrating differences (share culture, learn about others, embrace new experiences).  **5. Digital Detox**  **Introduce the students to:**  The concept of a digital detox and its benefits for social well-being.  How to disconnect from devices more often to strengthen real- world connections.  **Suggested Activities (sample):**  (Practicing Gratitude)  Provide worksheets to choose the right ways to express gratitude.  Celebrate ‘gratitude day’ in the college and encourage the students to honour the house keeping staffin some way to express gratitude  for their service. |  |
| **7** | **Intellectual Well-being**  1.**Being a lifelong Learner**  **Give students an understanding on:**  The relevance of intellectual well-being in this 21st century to meet the expectations in personal and professional well-being  The Importance of enhancing problem-solving skills  Cultivating habits to enhance the intellectual well-being (using the library extensively, participating in extra-curricular activities, reading  newspaper etc.)  **2. Digital Literacy**  **Discuss:**  The key aspects of digital literacy and its importance in today's world.  It is more than just liking and sharing on social media.  The four major components of digital literacy (critical thinking, communication, problem-solving, digital citizenship).  Why is digital literacy important?  Boosting one's digital skills.  **3. Transfer of Learning**  Connections between different subjects - How knowledge gained in one area can be applied to others.  **Suggested Activities(sample):**  Intellectual Well-being  Provide worksheets to students for teaching them how to boost intellectual well-being  Ask the students to identify a long-standing problem in their locality, and come up with a solution and present it in the classroom. Also organize an event like ‘1dea Expo’ to display the designs, ideas, and suggestions, to motivate the students to improve their intellectual well-being. |  |
| **8** | **Environmental Well-being**  1.The Importance of initiating a change in the environment  **The session could be around:**  Defining Environmental well-being (physical, chemical, biological, social, and psychosocial factors) - People's behaviour, crime, pollution, political activities, infra-structure, family situation etc.  Suggesting different ways of initiating changes in the environment (taking responsibility, creating awareness, volunteering, approaching administration)  **Suggested Activities (sample):**  Providing worksheets to self-reflect on how the environment affects their life, and the ways to initiate a change.  Dedicate a bulletin board or wall space (or chart work) in the classroom for students to share their ideas for improving environmental well-being.  Creating a volunteers' club in the college and carrying out monthly activities like campus cleaning, awareness campaigns against noise pollution, (loud speakers in public places), addressing anti- social behaviour on the campus or in their locality. |  |
| **9** | **Mental Well-being**  **1. Importance of self-reflection**  **Discuss:**  Steps involved in achieving mental well-being (self-reflection, self- awareness, applying actions, achieving mental well-being).  Different ways to achieve mental wellbeing (finding purpose coping with \_stress, moral compass, connecting for a common cause).  The role of journaling in mental well-being.  **2. Mindfulness and Meditation Practices**  Benefits of practicing mindful habits and meditation for overall well- being.  **1. Connecting with nature**  Practising to be in the present moment - Nature walk, feeling the sun, listening to the natural sounds.  Exploring with intention - Hiking, gardening to observe the nature.  Reflecting on the emotions, and feeling kindled by nature.  **2.Serving people**  Identifying the needs of others.  Helping others.  Volunteering your time, skills and listening ear.  Finding joy in giving.  **3. Creative Expressions**  Indulging in writing poems, stories, music making/listening. Creating visual arts to connect with inner selves.  **Suggested Activities(Sample):**  (Mindfulness and Meditation) - Conducting guided meditation every day for 10 minutes and directing the students to record the changes they observe. |  |
| **10** | **Situational Awareness (Developing Life skills)**  **1. Being street smart**  **Discuss:**  Who are street smarts?  Why is it important to be street smart?  Characteristics of a street smart person: Importance of acquiring life skills to become street smart - (General First-aid procedure, CPR Procedure, Handling emergency situations like fire, flood etc.),  **2. Digital Awareness**  **Discuss:**  Cyber Security  Information Literacy  Digital Privacy  Fraud Detection  **Suggested Activities (sample):**  (Street Smart) Inviting professionals to demonstrate the CPR Procedure  Conducting a quiz on Emergency Numbers |  |
| **11** | **Understanding Addiction**  **Plan this session around:**  Identifying the environmental cues, triggers that lead to picking up this habit.  Knowing the impact of substance abuse - Adverse health conditions, social isolation, ruined future, hidden financial loss and damaging the family reputation  Seeking help to get out of this addiction.  **Suggested Activities:**  Provide Worksheets to check the students"' level of understanding about substance addiction and their impacts.,  Share case studies with students from real-life.  Play/share awareness videos on addiction/de-addiction, experts talk.  \*Conduct awareness programmes on Drugs and its il effects.  (Arrange Experts from the concerned government departments and NGOs working in drug addiction issues) and maintain the documents of the program. |  |

**Closure:**

Each student should submit a Handwritten Summary of their Learnings & Action Plan for the future.

**Assessments:**

* Use Self-reflective worksheets to assess their understanding.
* Submit the worksheets to internal audit/external audit.
* Every student’s activities report should be documented and the same have to be assessed by the Physical Director with the mentor. The evaluation should be for 100 marks. No examination is required.

**Scheme of Evaluation**

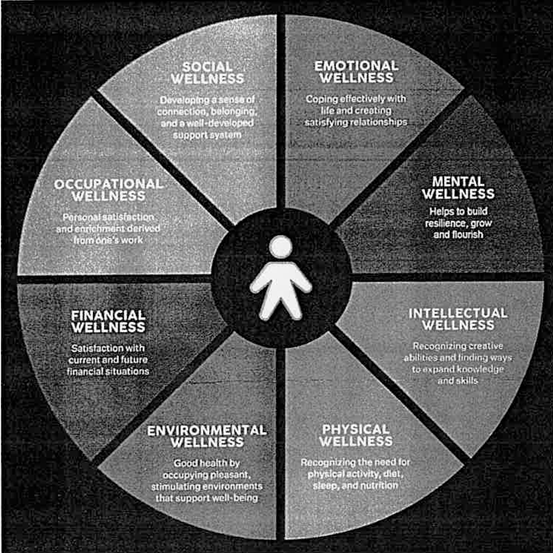
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| --- | --- | --- |
| **Part** | **Description** | **Marks** |
| A | Report | 40 |
| B | Attendance | 20 |
| C | Activities (Observation During Practice) | 40 |
|  | Total | 100 |

**References/Resource Materials:**

The course acknowledges that individual needs for references and resources may vary.

However, here are some general reference materials and resources that may be helpful:

1. **The Well-Being Wheel:**

****

**2. Facilities & Spaces:** Some activities may require access to specific facilities, resources or spaces. Students may need to coordinate with the college administration to reserve these as required

**3. Online Resources:**

1. United Nations Sustainable Development Goals - Goal 3 - Good Health & Well-

Being: https://www.un.org/sustainabledevelopment/health/

2. Mindfulness and Meditation: Stanford Health Library offers mindfulness and

meditation resources:

<https://healthlibrary.stanford.edu/books-resources/mindfulness-meditation.html>

3. Breaking Bad Habits: James Clear provides a guide on how to build good habits

and break bad ones: https://jamesclear.com/habits

4. 6 Ways to Keep Your Brain Sharp

https://www.lorman.com/blog/post/how-to-keep-your-brain-sharp

5. What ls Social Wellbeing? 12+ Activities for Social Wellness

https://positivepsychology.com/social-wellbeing/

6. How Does Your Environment Affect Your Mental Health?

https://www.verywellmind.com/how-your-environment-affects-your-mental-health-5093687

7. How to say no to others (and why you shouldn't feel guilty)

https://www.betterup.com/blog/how-to-say-no

**JOB ORIENTED CERTIFICATE COURSE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **2. Assistant Designer – Home Furnishing (AMH/1220), NSQF Level 4** | | | | | | | |
| **Name of the Department** | | | | | | Textiles and Apparel Design | |
| **Name of the Faculty Member i/c**  **With Complete Address with Phone and e-mail** | | | | | | **Dr. S.Grace Annapoorani**  Professor, Dept. of Textiles and Apparel Design, Bharathiar University, Coimbatore – 46  Email: [gracetad@buc.edu.in](mailto:amuthatad@buc.edu.in)  Mb: 9500509797 | |
| **Inter / Intra Department Course** | | | | | | Inter/Intra Department Course | |
| **Duration of the Course** | | | | | | 60 hours | |
| **Eligibility** | | | | | | 12th Standard | |
| **Number of Candidates to be Admitted** | | | | | | 25 | |
| **Mode of the Course** | | | | | | Regular | |
| **Collaboration with Company**  (if Yes, Full Address of the Company Address , Name of the Contact Person, Phone, e-mail etc.) | | | | | | K.P.R Mill Limited 'Corporate Office', Shrivari Srimat, 1045, Avinashi Road, Coimbatore - 641 018 Phone : 0422-2207777 (50 lines) Fax : 0422 – 2207778 | |
| **Registration Procedure** | | | | | |  | |
| **Job Opportunities:** Designer in home furnishing industry, freelance designer. | | | | | | | |
| **The objectives of the Course are:** | | | | | | | |
| The main objectives of this course are to: | | | | | | | |
| 1 | | | Understand trends in design development. | | | | |
| 2 | | | Apply knowledge of fabrics, trims and accessories for selection of suitable materials. | | | | |
| 3 | | | Develop proto sample with techpack. | | | | |
| 4 | | | Understand and implement the design development process. | | | | |
| 5 | | | Learn the industry and organizational requirements. | | | | |
| **Course Content** | | | | | Lecture & Internship | | |
|  | | | | | | | |
| **Module 1** | | | | Research on design trends and consolidating forecast to develop design. (theory) | | | **4 hours** |
| **Module 2** | | | | Internship | | | **8 hours** |
| **Module 3** | | | | Fabrics, trims and accessories based on attribute making them suitable for the product class that is to be developed | | | **4 hours** |
| **Module 4** | | | | Internship(theory) | | | **8 hours** |
| **Module 5** | | | | Proto sample **-**Techpack, developing proto sample and getting it approved (theory) | | | **4 hours** |
| **Module 6** | | | | Internship | | | **8 hours** |
| **Module 7** | | | | Design development processes and Complete documentation of design development processes. (theory) | | | **4 hours** |
| **Module 8** | | | | Internship | | | **8 hours** |
| **Module 9** | | | | Hazards and risks associated with the process, medical emergencies and evacuation process. Industry and organizational requirements. (theory) | | | **4 hours** |
| **Module 10** | | | | Internship | | | **8 hours** |
|  | | | |  | | |  |
| **Books** | | | | | | | |
| 1 | Fashion Design Course, Steven Faerm, Barron’s, 2010. | | | | | | |
| 2 | Fashion Design Essentials, Jay Calderin, Rockport Publishers, 2012. | | | | | | |
|  | | | | | | | |
| **References** | | | | | | | |
| 1 | How to be a Fashion Designer, Lesley Ware, Tiki Papier, Dorling Kindersley Limited, 2018. | | | | | | |
| 2 | The Fundamentals of Fashion Design, Richard Sorger, Jenny Udale, AVA Publishing, 2006. | | | | | | |
|  | | | | | | | |
| **Related Online Contents** | | | | | | | |
| 1 | | <https://www.coursera.org/learn/fashion-design> | | | | | |
| 2 | | <https://www.edx.org/professional-certificate/hkpolyux-fashion-design-and-creation> | | | | | |
| 3 | | <https://www.oxfordhomestudy.com/courses/fashion-courses-online/fashion-designing-online-courses-free> | | | | | |
| 4 | | <https://www.arts.ac.uk/subjects/fashion-business/short-courses/fashion-management/fashion-trend-forecasting-online-short-course-lcf> | | | | | |
|  | | | | | | | |

**SEMESTER IV**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course code** | | | | **43P** | **BOUTIQUE MANAGEMENT AND ONLINE BUSINESS** | **L** | | **T** | | | **P** | **C** |
| **Core – Practical** | | | | | - | | - | | | 4 | 4 |
| **Pre-requisite** | | | | | **Basic knowledge to start a business & plan** | **Syllabus Version** | | | 2025 - 2026 | | | |
| **Course Objectives:** | | | | | | | | | | | | |
| The main objectives of this course are to:   1. To learn about boutique business management 2. To impart the knowledge of developing business plan 3. To Understand about material sourcing and supplier relations 4. To Analyze about Marketing techniques and legal requirements 5. To understand the benefits and process of online boutique | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | |
| 1 | | | Understand the concept of Boutique management | | | | | | | K1 | | |
| 2 | | | Developing a business plan | | | | | | | K2 | | |
| 3 | | | Sourcing of materials and relationship with supplier | | | | | | | K3 | | |
| 4 | | | Applying Marketing techniques, fulfilment of legal procedures and IP registrations | | | | | | | K4 | | |
| 5 | | | Creation of online business | | | | | | | K6 | | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6**– Create | | | | | | | | | | | | |
| **Boutique management and online business** | | | | | | | **75 hours** | | | | | |
| 1. **Boutique Management** -Introduction to boutique management, Boutique management – types of Boutique, planning, layout and storing.  2. **Designing costumes to the wearer-**Personality and self concept - Motivation in clothing choices - Individual values, interests and attitudes related to clothing -. Visual merchandising and colour pallets.  3. **Procedures to start a business-** Boutique interior planning – Boutique interiors and display locations, fixture &, fixture & dressings, purchase display systems  4. **Relationship with supplier and consumers-** Buyer supplier relationships - technical support, expertise, resource support service level risk reduction consumer relationship,  **5. Sales and Promotion-** Effective Sales techniques, Boutique operations, Brand Building, Competitive strategies, Recent technologies in Offline and Online boutique business, creating of web pages, online advertising, print and distribution of flyers. | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | **75 hours** | | | | | | |
| **Text Books** | | | | | | | | | | | | |
| 1 | Laura Bliss, Guide Visual Merchandising and Display III Edition, Fairchild Publications. | | | | | | | | | | | |
| 2 | Manmeet sodhia, Fashion marketing and merchandising, Kalyani Publishers | | | | | | | | | | | |
| 3 | Gastelino. M. Fashion Kaleidoscope, Rupa & Co. 1994. | | | | | | | | | | | |
| 4 | Gibson. G. Vedomani, Retail Management, Jaico Publishing house, Bangalore | | | | | | | | | | | |
| 5 | Elaine Stone, The Dynamics of Fashion, Fairchild Publication | | | | | | | | | | | |
| 6 | Brenda Sternquiest international Retailing, Fairchild Publication, New York | | | | | | | | | | | |
| 7 | Martin. M. Pegler, Store Window No.14, No 12, Visual reference Publishers, New York. | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | |
| 1 | Briana Stewart, Opening a Boutique Guide: How to Start your Own Unique Clothing Boutique, Bull City Publishing, 2014 | | | | | | | | | | | |
| 2 | Tag Goulet, DebbraMikaelsen, CatherineGoulet, Fabjob, Guide to Become a Boutique Owner, FabJob Publisher, 2011 | | | | | | | | | | | |
| 3 | Jennifer Lynne Matthews, Fashion Un raveled: How to Start, Run and Manage an Independent Fashion Label ,East Bay Fashion Resource; First edition,  2009. | | | | | | | | | | | |
| 4 | Charlene Davis, Start Your Own Clothing Store and More: Women's, Men's, Children's, Specialty (Startup Series), Entrepreneurs press and Paperback – Third edition,2011. | | | | | | | | | | | |
| 5 | Christy Wright, Business Boutique: A Woman's Guide for Making Money Doing What She Loves, Ramsey Press, 2017. | | | | | | | | | | | |
| 6 | Entrepreneur Press,Start Your Own Clothing Store and More: Women's, Men's, Children's, Specialty Entrepreneur Press, 01-Jan-2011 | | | | | | | | | | | |
| 7 | Leontine de Wit, Boutiques and Other Retail Spaces: The Architecture of Seduction David Vernet, Routledge, 2007. | | | | | | | | | | | |
| 8 | Tom Harris, Start-up: A Practical Guide to Starting and Running a New Business, Springer, 2018. | | | | | | | | | | | |
| 9 | Neil R. Bingham, The New Boutique: Fashion and Design, Merrell publishers, 2005 | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | |
| 1 | | https://sctvesd.wb.gov.in/academic/sttc/sttc\_course/view\_course/383 | | | | | | | | | | |
| 2 | | https://ecomstart.io/boutique-business-ideas/ | | | | | | | | | | |
| 3 | | https://www.udemy.com/course/boutique-basics-how-to-run-a-successful-fashion-boutique/?srsltid=AfmBOoovOJWMMCorNHbSfXBclTZMSW4XfdgZnwVWo3hb6L4BrUKyukdn&couponCode=NVDINCTA35TRT | | | | | | | | | | |
| 4 | | https://iada.co.in/boutique-management-course/ | | | | | | | | | | |
| 5 | | https://www.cindrebay.com/certificate-in-boutique-management | | | | | | | | | | |
| **Course Designed By: Dr.M.Jayakumari** | | | | | | | | | | | | |

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| **Mapping with Programme Outcomes** | | | | | | | | | | |
| **Cos** | **PO1** | **PO2** | **PO3** | **PO4** | **PO5** | **PO6** | **PO7** | **PO8** | **PO9** | **PO10** |
| **CO1** | M | S | S | L | S | M | L | M | S | M |
| **CO2** | S | S | S | S | M | S | S | S | S | S |
| **CO3** | S | S | S | S | M | S | S | S | S | S |
| **CO4** | S | S | S | M | M | S | S | S | S | S |
| **CO5** | S | S | S | S | S | S | S | S | S | S |

\*S-Strong; M-Medium; L-Low

**VALUE ADDED COURSE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **MURAL PAINTING** | | | | | | | |
| **Name of the Department** | | | | | | **Textiles and Apparel Design** | |
| **Name of the Faculty Member i/c**  **With Complete Address with Phone and e-mail** | | | | | | **Dr.M. Sumithra**  Assistant Professor,  Dept. of Textiles and Apparel Design, Bharathiar University, Coimbatore – 46  Mb: 8870233330  Email: [sumitad@buc.edu.in](mailto:sumitad@buc.edu.in) | |
| **Inter / Intra Department Course** | | | | | | Inter / Intra Department Course | |
| **Duration of the Course** | | | | | | 40 hours | |
| **Eligibility** | | | | | | Any graduates | |
| **Number of Candidates to be Admitted** | | | | | | 25 | |
| **Registration Procedure** | | | | | | By contacting the department through email or in person | |
| **Job Opportunities:** Entrepreneur, Graphic Designer, Boutique Manager, Fashion Designer | | | | | | | |
|  | | | | | | | |
| **The objectives of the Course are:** | | | | | | | |
| The main objectives of this course are to: | | | | | | | |
| 1 | | | Show Kerala mural | | | | |
| 2 | | | Demonstrate mural painting | | | | |
| 3 | | | Develop painting | | | | |
| 4 | | | Analyze different design | | | | |
| 5 | | | Prove design on garments | | | | |
| **Course Content** | | | | | Lecture / Practical / Project / Internship | | |
|  | | | | | | | |
| **Module 1** | | | | Colour theme of Kerala mural, its application(theory) | | | **4 hours** |
| **Module 2** | | | | The basic designs and their application(theory) | | | **4 hours** |
| **Module 3** | | | | Painting the basic patterns on cloth | | | **4 hours** |
| **Module 4** | | | | Painting a peacock on cloth | | | **4 hours** |
| **Module 5** | | | | Painting a ladies face on cloth | | | **4 hours** |
| **Module 6** | | | | Painting God ‘s face on a cloth | | | **4 hours** |
| **Module 7** | | | | Painting a swan on a silk cloth ( a dark coloured cloth) | | | **4 hours** |
| **Module 8** | | | | Painting a design on a cloth bag | | | **4 hours** |
| **Module 9** | | | | Painting a design on a canvas | | | **4 hours** |
| **Module 10** | | | | Painting directly on a shirt or any garment | | | **4 hours** |
|  | | | | **Total** | | | **40 hours** |
| **Books** | | | | | | | |
| 1 | Glimpses of Nazraney Heritage, O  [Menachery, George](https://en.wikipedia.org/wiki/George_Menachery),  Saras, 2005. | | | | | | |
| 2 | Temple Arts of Kerala: A South Indian Tradition. ,Bernier, R. M, New S. Chand. 1982. | | | | | | |
|  | | | | | | | |
| **References** | | | | | | | |
| 1 | Uses of Plants and Plant Products in Traditional Indian Mural Paintings, K Nayar, T. S.; Binu, S.; Pushpangadan, ". *Economic Botany*.1999. | | | | | | |
| 2 | Indian court painting, 16th-19th century.,Kossak, Steven, The Metropolitan Museum of Art, 1997. | | | | | | |
|  | | | | | | | |
| **Related Online Contents** | | | | | | | |
| 1 | | <https://www.pinterest.com/pin/551831760587206315/> | | | | | |
| 2 | | <https://www.livehistoryindia.com/living-history/2019/07/17/the-vibrant-murals-of-kerala> | | | | | |
| 3 | | <http://keralamuralpainting.com/> | | | | | |

**List of SWAYAM / MOOC /NPTEL Online Courses**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.NO.** | **COURSE NAME** | **DURATION** | **CREDITS** |
|  | NPTEL- Science of Clothing Comfort | 4 WEEKS | 6 |
|  | Organic Farming For Sustainable Agricultural Production | 4 WEEKS | 4 |
|  | MOOC- Fashion And Sustainability, Understanding Luxury Fashion in a Changing World | 4 WEEKS | 2.5 |
|  | How to Build a Sustainable Fashion Business | 8 WEEKS | 4 |
|  | Environmental Protection And Sustainability | 8 WEEKS | 4 |
|  | Digital Arts | 8 WEEKS | 4 |
|  | The Art Of Photography | 4 WEEKS | 2 |
|  | Portfolio and Risk Management | 4 WEEKS | 2 |
|  | Entrepreneurial Operation: Launching A Startup | 4 WEEKS | 2 |
|  | Swayam- Advertising | 4 WEEKS | 2 |
|  | Coursera- Graphic Design Specialization | 4 WEEKS | 2 |
|  | Photography | 4 WEEKS | 2 |
|  | Creative Entrepreneur | 4 WEEKS | 2 |
|  | Modern Arts And Ideas | 5 WEEKS | 2.25 |
|  | Art And Ideas Teaching With Themes | 5 WEEKS | 2.25 |
|  | Abstract Painting | 8 WEEKS | 4 |
|  | Fundamental And Graphic Design | 4 WEEKS | 2 |
|  | Creating a Portfolio | 4 WEEKS | 2 |
|  | Video Processing | 12 WEEKS | 6 |
|  | Science of Clothing Comfort | 12 WEEKS | 6 |
|  | Technical Textiles | 12 WEEKS | 6 |
|  | Innovation business models &entrepreneurship | 8 WEEKS | 4 |
|  | Research Methodology | 8 WEEKS | 4 |
|  | Entrepreneurship & IP strategy | 8 WEEKS | 4 |
|  | Introduction to retail management | 6 WEEKS | 2 |
|  | Sustainability science | 12 WEEKS | 6 |
|  | Computer aided design/Computer aided manufacturing | 6 WEEKS | 2 |
|  | Entrepreneurship: Do your venture | 6 WEEKS | 2 |
|  | Introduction to research | 8 WEEKS | 4 |
|  | Textile Finishing | 12 WEEKS | 6 |

**BU MOOC COURSES**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Course code** | | | |  | | **TECHNICAL TEXTILES AND ITS APPLICATIONS** | **L** | | | | **T** | | **P** | **C** |
| **BU MOOC** | | | | | | **2** | | | | **-** | | **-** | **2** |
| **Pre-requisite** | | | | | | Basic knowledge in Textile science | **Syllabus Version** | | | | | 2025-2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about fibers and methods used for the production of Technical Textiles 2. Learn in detail about the classifications of Technical Textiles 3. Learn about the application of the Technical Textiles in various fields | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | |
| 1 | | | Identify textile fibers used in technical textiles products | | | | | | | | | | K1 | |
| 2 | | | Understand the various applications of Technical Textiles | | | | | | | | | | K2 | |
| 3 | | | Apply their knowledge about contribution of technical textiles in various fields | | | | | | | | | | K3 | |
| 4 | | | Analyse the different types of technical textiles products in the market. | | | | | | | | | | K4 | |
| 5 | | | Design products for the application of technical textile products in the industry. | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:1** | | | | | **Technical Textiles &Fibers** | | | | | **06 hours** | | | | |
| **Technical Textiles:** Introduction, Meaning, Definition, Classification, Scope of Technical Textiles Applications of technical textiles.  **Technical Fibers:** Developments in natural fibers, High – Strength and high-modulus organic fibers, High chemical and combustion - resistant organic fibers, High performance inorganic fibers, Ultra-fine and novelty fibers. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:2** | | | | | **Medical Textiles** | | | | **06 hours** | | | | | |
| **Medical Textiles:** Introduction, Fibers used, Properties, Classification- Non – Implantable, Implantable, Extra corporal devices, Health care /Hygiene Products and Applications. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:3** | | | | | **Agro Textiles** | | **06 hours** | | | | | | | |
| **Agro Textiles** – **-** Introduction, fibers used Types, functions and properties, Characteristics and Applications in Agro products and in its field | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:4** | | | | | **Protective Textiles** | | **06 hours** | | | | | | | |
| **Protective Textiles:** Introduction, fibers used Types, functions and properties, Characteristics and Applications in various Protective clothing. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:5** | | | | | **Smart and Intelligent Textiles** | | **06 hours** | | | | | | | |
| **Smart and Intelligent Textiles** – Classification - Active smart, passive smart and very smart textiles and - Phase change materials, shape memory polymers, chromic and conductive Materials and its applications invarious Wearable technology. | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Unit:6** | | | | **Contemporary Issues** | | | | **02 hours** | | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | **30 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | |
| 1 | Hand book of Technical textiles, A. R. Horrocks and S. C. Anand, Wood head publishing ltd, England,2000 | | | | | | | | | | | | | |
| 2 | Technical Textiles and its Application, Dr.S.Grace Annapoorani, LASER Park Publishing House, India ,2017 | | | | | | | | | | | | | |
| 3 | Textiles for Industrial Applications , R Senthil Kumar, CRC Press,2013 | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | | |
| 1 | V. Textile Fibers: Developments and Innovations. Kothari, New Delhi: IAFL Publications, 2000. | | | | | | | | | | | | | |
| 2 | Handbook of Industrial Textiles, Sabit Adanur, Wellington Sears CRC Press, 1995 | | | | | | | | | | | | | |
| 3 | Dr.S.Grace Annapoorani- Agro Textiles and its Application, Wood head publishing ltd, India, 2018 | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | |
| 1 | | <http://ugcmoocs.inflibnet.ac.in/ugcmoocs/view_module_ug.php/130> | | | | | | | | | | | | |
| 2 | | https://www.textile Learner blogspot.con | | | | | | | | | | | | |
| 3 | | <https://textilelearner.blogspot.com/2020/03/nfc-embedded-smart-textiles.html> | | | | | | | | | | | | |
| 4 | | <https://www.technical-textiles.net> | | | | | | | | | | | | |
| 5 | | <https://www.sciencedirect.com/topics/materials-science/smart-textiles> | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | |
| **Course Designed By:** Dr.S.Grace Annapoorani | | | | | | | | | | | | | | |

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| **Course code** | | |  | **ATTIRE DESIGNING** | **L** | | | **T** | | | | **P** | **C** |
| **BU MOOC** | | | | **2** | | | **0** | | | | **0** | **2** |
| **Pre-requisite** | | | | Basic knowledge about designing | **Syllabus Version** | | | 2025 - 2026 | | | | | |
| **Course Objectives:** | | | | | | | | | | | | | |
| 1. Study about body measurements and its principles 2. To understand about pattern making methods 3. To acquire knowledge about Fitting 4. To be aware about lay out planning 5. To learn Fashion Designing | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Expected Course Outcomes:** | | | | | | | | | | | | | |
| on the successful completion of the course, student will be able to: | | | | | | | | | | | | | |
| 1 | Understand Body Measurements | | | | | | | | | | K2 | | |
| 2 | Understand different types of pattern making methods | | | | | | | | | | K2 | | |
| 3 | Analyze principles of fit and alterations | | | | | | | | | | K4 | | |
| 4 | Classify Layout types | | | | | | | | | | K4 | | |
| 5 | Apply color theory | | | | | | | | | | K3 | | |
| **K1** – Remember; **K2** – Understand; **K3** – Apply; **K4** – Analyze; **K5** – Evaluate; **K6** – Create | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Unit:1** | | | **Body Measurements** | | | | | | | **7 hours** | | | |
| **Body measurements**–Importance and principles of taking body measurements, standardizing the Body measurements, commercial patterns. | | | | | | | | | | | | | |
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| **Unit:2** | | | **Pattern Making** | | | | | | **6 hours** | | | | |
| Pattern Making -Methods of Drafting, draping. flat pattern techniques and pattern grading | | | | | | | | | | | | | |
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| **Unit:3** | | | **Fitting And Pattern Alteration** | | | | **5 hours** | | | | | | |
| Fitting and pattern alteration-good fit, principles of good fit, pattern alteration, general principles of pattern alterations | | | | | | | | | | | | | |
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| **Unit:4** | | | **Lay Out Planning** | | | | **5 hours** | | | | | | |
| Lay out planning- definition, types of lay outs, economy of fabrics in placing patterns, adjusting fabric to patterns. | | | | | | | | | | | | | |
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| **Unit:5** | | | **Fashion Designing** | | | **5 hours** | | | | | | | |
| Fashion Designing - Elements, principles of design and colour | | | | | | | | | | | | | |
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| **Unit:6** | | | **Contemporary Issues** | | | **02 hours** | | | | | | | |
| Expert lectures, online seminars – webinars | | | | | | | | | | | | | |
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| **Total Lecture hours** | | | | | | **30 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | |
| 1 | Zarapkar System of cutting, Zarapkar Tailoring College, Navneet, 2010. | | | | | | | | | | | | |
| 2 | Pattern Making for Fashion Design, ,Armstrong, H, Harpes and Row, 2009 | | | | | | | | | | | | |
| 3 | [Metric Pattern Cutting for Menswear](https://www.amazon.com/Pattern-Cutting-Menswear-Winifred-Aldrich/dp/1405182938/ref=sr_1_fkmr0_1?dchild=1&keywords=metric+pattern+cutting%2CAldrich%2CWinifred%2C1977%2C+%2CBlackwell+science+Ltd+U.K&qid=1598612565&s=books&sr=1-1-fkmr0), [Winifred Aldrich](https://www.amazon.com/Winifred-Aldrich/e/B001IU4QUG?ref=sr_ntt_srch_lnk_fkmr0_1&qid=1598612565&sr=1-1-fkmr0), Wiley-Blackwell; 5th Edition,2011 | | | | | | | | | | | | |
| 4 | Design Elements, Color Fundamentals: A Graphic Style Manual for Understanding How Color Affects Design,[Aaris Sherin](https://www.amazon.com/Aaris-Sherin/e/B001K8CTV4/ref=dp_byline_cont_book_1),  Rockport , 2012. | | | | | | | | | | | | |
| 5 | Fashion designing and technology, Anmolroy, Sonali Publications, 2011. | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Reference Books** | | | | | | | | | | | | | |
| 1 | A Complete Guide to Fashion Designing, Jenny Davis, Abhishek Publications, Chandigarh, First Edition, 2006. | | | | | | | | | | | | |
| 2 | Introduction to Fashion Technology, PoojaKhurana and Monika Sethi, Laxmi, 2007. | | | | | | | | | | | | |
| 3 | Fashion design process innovation and practice, Kathryn Mckelvey and Janine munslow, Wiley, 2012. | | | | | | | | | | | | |
| 4 | Elements of Fashion and Apparel Design, Sumathi, G.J, New Age International ,2002. | | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | |
| 1 | | [https:<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827> //www.slideshare.net/DharmendraKumar344/pattern-making-study-material](https://www.slideshare.net/DharmendraKumar344/pattern-making-study-material) | | | | | | | | | | | |
| 2 | | [http<https://www.slideshare.net/sarwatshabbir/flat-pattern> s://nptel.ac.in/content/storage2/courses/109104075/pdf\_lectures/lecture3.pdf](https://nptel.ac.in/content/storage2/courses/109104075/pdf_lectures/lecture3.pdf) | | | | | | | | | | | |
| 3 | | [https:/<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827> /www.tigercolor.com/color-lab/color-theory/color-theory-intro.htm](https://www.tigercolor.com/color-lab/color-theory/color-theory-intro.htm) | | | | | | | | | | | |
| 4 | | [h<https://www.universityoffashion.com/disciplines/draping/> ttps://www.my-mooc.com/en/mooc/design-principles-an-introduction/](https://www.my-mooc.com/en/mooc/design-principles-an-introduction/) | | | | | | | | | | | |
| 5 | | <https://www.my-mooc.com/en/mooc/designing-and-creating-skirts/>ration-a-multi-method-approach-to- | | | | | | | | | | | |
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| **Course Designed By:** Dr.M.Sumithra | | | | | | | | | | | | | |

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| **Course code** | | | |  | | **SUSTAINABLE FASHION** | **L** | | | | | **T** | | **P** | **C** |
| **BU MOOC** | | | | | | 2 | | | | | 0 | | 0 | 2 |
| **Pre-requisite** | | | | | | Basic knowledge about fashion and sustainability | **Syllabus Version** | | | | | | 2025 - 2026 | | |
| **Course Objectives:** | | | | | | | | | | | | | | | |
| The main objectives of this course are to:   1. Learn about sustainability of Fashion industry. 2. Learn about ethical fashion. 3. Learn about Eco textiles and Eco friendly fashion labels. | | | | | | | | | | | | | | | |
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| **Expected Course Outcomes:** | | | | | | | | | | | | | | | |
| On the successful completion of the course, student will be able to: | | | | | | | | | | | | | | | |
| 1 | | | Understand sustainability of fashion industry. | | | | | | | | | | | K2 | |
| 2 | | | Analyze ethical fashion. | | | | | | | | | | | K4 | |
| 3 | | | Analyze eco-textiles and eco-friendly fashion labels. | | | | | | | | | | | K4 | |
| 4 | | | Evaluate sustainable fashion products. | | | | | | | | | | | K5 | |
| 5 | | | Create upcycled / downcyled products. | | | | | | | | | | | K6 | |
| **K1** - Remember; **K2** - Understand; **K3** - Apply; **K4** - Analyze; **K5** - Evaluate; **K6** - Create | | | | | | | | | | | | | | | |
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| **Unit:1** | | | | | Sustainable Development Goals (SDG) – The 17 Goals | | | | | | **6 hours** | | | | |
| History and implementation | | | | | | | | | | | | | | | |
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| **Unit:2** | | | | | **Sustainability in Fashion Clothing** | | | | | **5 hours** | | | | | |
| Introduction: Fashion, Sustainability, Pillars of sustainability, Sustainable fashion – meaning and importance.  Clothing lifecycle, clothing care, fast and slow fashion, clothes repair and re-use | | | | | | | | | | | | | | | |
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| **Unit:3** | | | | | **Ethical & Circular Fashion** | | | | **6 hours** | | | | | | |
| Concepts of recycling and upcycling. Carbon footprint, water footprint and energy consumption of fashion industry. Circular economy in fashion industry | | | | | | | | | | | | | | | |
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| **Unit:4** | | | | | **Green Consumerism** | | | | **5 hours** | | | | | | |
| Eco-textiles, green consumerism and waste reduction, consumer responsibility towards sustainable fashion. 3Rs – Reduce, Reuse and Recycle. | | | | | | | | | | | | | | | |
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| **Unit:5** | | | | | **Sustainable Fashion Brands and Labels** | | | **6 hours** | | | | | | | |
| Sustainable fashion designers, sustainable fashion brands, Eco-friendly fashion labels - India | | | | | | | | | | | | | | | |
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| **Unit:6** | | | | | **Contemporary Issues** | | | **02 hours** | | | | | | | |
| 1. Prepare and submit and upcycled/downcycled product made from old clothes. 2. Expert lectures, online seminars - webinars | | | | | | | | | | | | | | | |
|  | | | | | | | | | | | | | | | |
| **Total Lecture hours** | | | | | | | | **30 hours** | | | | | | | |
| **Text Books** | | | | | | | | | | | | | | | |
| 1 | Sustainable Fashion Handbook, Black, S, Thames and Hudson, 2013. | | | | | | | | | | | | | | |
| 2 | Re-Fashioned- Cutting Edge Clothing from Upcycled Materials, Brown S, Lawrence King Publishing, 2013. | | | | | | | | | | | | | | |
| 3 | Fashion and Sustainability-Design for Change, Fletcher K, Lawrence King Publishing, 2012. | | | | | | | | | | | | | | |
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| **Reference Books** | | | | | | | | | | | | | | | |
| 1 | Cut up Couture- Edgy Upcycled Garments to Sew, YamaseK,Interweave, 2012. | | | | | | | | | | | | | | |
| 2 | Sustainable Fashion and Textiles- A Design Journey, Fletcher K, Lawrence King Publishing, 2008. | | | | | | | | | | | | | | |
| 3 | Sustainable Luxe- A Guide to Feel Good Fashion, Phillips J, Create Space Publishing, 2013. | | | | | | | | | | | | | | |
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| **Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]** | | | | | | | | | | | | | | | |
| 1 | | <https://www.coursera.org/learn/sustainable-fashion> | | | | | | | | | | | | | |
| 2 | | <https://www.edx.org/course/circular-fashion-in-a-sustainable-clothingindustry> | | | | | | | | | | | | | |
| 3 | | <https://www.my-mooc.com/en/mooc/sustainable-fashion/> | | | | | | | | | | | | | |
| 4 | | <https://www.sustainablefashionmatterz.com/what-is-sustainable-fashion> | | | | | | | | | | | | | |
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| **Course Designed By:** Dr.K.Amutha | | | | | | | | | | | | | | | |