	Training Schedule – Fibre to Fabric (668)						
	Total Contact Hours: 240 hrs (PCP(120 hrs) + Self Study (120hrs)						
		PCP- 120hrs ((Theory (30hrs) + Practical (90)hrs)			
Session	Lesson	Theory (1 hour)	Practical (3 Hours)	Self study /Assignment	Learning Outcomes		
Day 1	1. Knowing Textile Fibres	 1.1.Textile Fibre 1.2. Classification of textile fibres. Length - Staple and Filament Origin 1.3. Natural Fibres Cellulosic/ Vegetable Protein Fibres/Animal Fibres Mineral Fibres 14. Manmade Fibres Regenerated Synthetic Others 	Portfolio activity 1.2 Portfolio activity 1.3 Group discussion on classification of fibres. Make a chart to show the classification of fibres	Portfolio activity 1.1 Know your progress 1.1 Undertake a market survey to study the different types of fabrics available in your neighborhood. Write a report. Collect samples of different types of fabrics available in the market. Paste samples in the practical file and lable them	Classifies textile fibres on the basis of: - Length - Origin Classifies Natural Fibres as: - Cellulosic/ Vegetable - Protein /Animal Classifies Mineral Fibres Classifies Manmade Fibres as: - Regenerated - Synthetic - Others		
Day 2		 15. Fibre properties Primary Properties Fibre length to width ratio Tenacity or strength Flexibility or pliability Fibre uniformity Cohesiveness Secondary Properties Physical Properties Morphology, Longitudinal view, 	Practical 1.1 Make a chart to show the properties of different fibres. Group discussion on the Primary and Secondary properties of fibres and their impact on the	Know your progress 1.2 Undertake small group discussions with shopkeepers to find out what fibre fabrics show bigger sales and the reasons for this excessive demand. Collect samples of the fabrics in greater	Categorises Fibre properties as: - Primary Properties - Fibre length to width ratio - Tenacity or strength - Flexibility or pliability - Fibre uniformity		

		 Cross sectional view , Colour, Lustre, Elongation, Moisture absorption, Resilency, Dimensional stability, Abrasion, Thermal properties Static electricity 	consumers' choice and purchase.	demand and paste them in the practical file and label them.	- Cohesiveness Secondary Properties
Day 3		 Chemical Properties Effect of acids Effect of alkali Effect of sunlight Biological Properties Fungi/mildew Bacteria Beetles Silverfish 	 Discuss how the chemical properties impact the choice of fabrics consumers. Write a report Discuss how the Biological properties impact the consumers. Write a report on the outcomes of your discussion. 	 Discuss with family and friends how the Biological properties contribute in the choice of fibre for article used and clothing of daily use. Write a report on the outcome of the discussions. 	Critically evaluates Chemical and Biological Properties of fibres.
Day 4	2.Natural fibres	 2.1. Natural fibre Cellulosic and Protein Fibres: Cotton, Jute, Flax, Silk, wool Morphology Microscopic view - Cross sectional and Longitudinal Diameter Length Physical properties Colour 	Discuss about the Morphology of natural fibre. Make a chart showing physical properties of cellulosic, protein and mineral fibre. Practice the procedure of preparing slides for viewing the fibres under	Know your progress 2.1 Collect and paste samples of fabrics chosen on basis of their physical properties for specific needs. Continue the practice of preparing slides	Identifies Natural fibres like Cotton, Jute, Flax, Silk, wool by Cross sectional and Longitudinal Microscopic view and recognizes fibres on basis of: - Diameter - Length • Enumerates the

	 Luster Strength Elasticity Resiliency Absorbency Dimensional Stability 	the microscope: Cross Sectionally Longitudinally Practice working with the microscope to study the fibres Study the different natural fibres under the microscope and record your observations in the practical file	Record your observations in the practical file. Illustrate your observations with sketches of fibre as seen under the microscope	Physical properties of fibres.
Day 5	Chemical properties - effect of: - Acids - Alkalies - Organic Solvents - Sunlight	Make a chart showing chemical properties of cellulosic, protein and mineral fibre. Practice testing of natural fibres chemically and record the procedure adopted and the results in the practical file	Know your progress 2.3, Know your progress 2.4 Know your progress 2.5 Study the effect of sunshine on fabrics used for different garment of the family members when dried in the open.	 Assesses the Chemical properties by studying the effect of: Acids Alkalies Organic Solvents Sunlight
Day 6	Biological properties - Effect of Micro organisms - Effect of insects 2.3. End uses Garments, Furnishings, Blankets, carpets, Safety apparel, Sweaters , Shawls etc.	Make a chart comparing the biological properties of cellulosic, protein and mineral fibre.Make a market survey and study the choice of fibres by the consumers (End Use) when selecting fabrics for: - Clothes for home - Clothes for office - Clothes for winter	Portfolio activity 2.1 Portfolio activity 2.2 Hold small group discussions and study the fibre qualities that guide us in choosing the appropriate fibre fabrics for different uses in the home.	 Assesses the Biological properties by studying: Effect of Micro organisms Effect of insects Appreciates the End uses of fabrics as Garments,

			 Clothes for summer Carpets Furnishings Write a report listing the properties of fibres that need to be kept in mind while selecting fabrics for the above listed articles of use. 		Furnishings, Blankets, carpets, Safety apparel, Sweaters, Shawls etc.
Day 7		 3.1.Man-made fibers Regenerated fibres Rayon Acetate Synthetic Fibres Nylon Polyester Acrylic Spandex 	Draw a chart showing the morphology of manmade fibres. Group discussion to find out the reasons for the popularity of some manmade fibres. Write a report on the outcome of the discussions.	Know your progress 3.1 Portfolio activity 3.1 Collect samples of manmade fabrics made using Regenerated fibres and Synthetic Fibres and paste them in the practical file and lable them.	Classifies Man-made fibers as : • Regenerated fibres • Synthetic Fibres
Day 8	3. Man-made fibres	3.2.Properties of manmade fibres Morphology - Microscopic view (Cross sectional and Longitudinal) - Diameter - Length Physical properties - Colour - Lustre - Strength - Elasticity	 Draw a chart showing the physical and chemical properties of manmade fibres. Practice the microscopic examination of manmade fibres under the microscope. Practice the chemical testing of manmade 	Practical work 3.1 Visit the local market and collect samples of manmade fibres available and paste in the practical file Practice the identification of physical properties of manmade fibres by visual examination	Studies the Properties of manmade fibres using: - Microscopic view (Cross sectional and Longitudinal) - Physical properties by - Colour - Luster - Strength - Elasticity - Resiliency - Absorbency

		 Resilency Absobancy Dimensional Stability Chemical properties - Effect of: Acids Alkalies Organic Solvents Sunlight Biological properties - Effect of: Micro organisms Effect of insects 	 fibres in the laboratory. Make chart comparing the biological properties of some manmade fibres. Paste samples of the fibres alongside those discussed and compared. Practice the identification of Manmade fibres by visual examination. Group discussion on the effect of micro organism and insects on manmade fibre fabrics. 		 Dimensional Stability Chemical properties by the effect of: Acids Alkalies Organic Solvents Sunlight
Day 9	4. Fibre Identification	 4.1. Fibre identification tests. Visual Examination Microscopic Test Burning test Chemical Test 4.2. Visual examination. 	Visually examine the fabric samples provided and record your observation as suggested in table 4.1	Know your progress 4.1 Portfolio activity 4.1 Visit the local market and study the fabrics available and identify the samples through visual examination. Record your observations along with pasting of sample pieces in the practical file.	- Undertakes the Visual Examination for Fibre identification .

Day 10	 4.3. Microscopic test Preparing slide for viewing Longitudinal view Cross sectional View 	Pull out some fibres from the fabric sample provided and prepare a slide of the fibre and examine them under microscope: (1) Longitudinally (2)Cross sectionally. Record your observation as shown in table 4.2	Know your progress 4.2 Practical 4.1 Make chart showing the cross section and longitudinal view of fabrics under a microscope of these listed below: • Cotton • Rayon • Silk • Wool • Nylon • Acrylic • Polyester	 Undertakes the following tests for Fibre identification. Microscopic Test Burning test Chemical Test Prepares slide for viewing the fibres Longitudinally and cross sectionally
Day 11	 4.4. Burning test. Study of fibres while: Approaching Flame In Flame Removed from Flame Odour Residue 	Do the burning test to help identify the fibres of the samples provided and record your observation as table 4.3	Practical 4.2 Take some samples of fabrics used for making garments by the family and identify the fibre content using the Burning Test	 Identifies fibres using the Burning test by studying the fibres while: Approaching Flame In Flame Removed from Flame Odour Residue
Day 12	 4.5. Chemical test Solubility test by using specific chemicals 	Do the chemical test to help identify the fibres of the samples provided and record your observation as shown in table 4.4	Portfolio activity 4.2 Tabulate to show the results of chemical testing of different fibres and record in the practical file.	 Identifies fibres using the Chemical test on basis of Solubility test by using specific

					chemicals
Day 13	5. Yarn Construction	 5.1. Understanding Yarns 5.2. Yarn and it's properties Yarn Twist Direction of Twist Amount of twist Yarn Crimp 5.3. Effect of yarn properties on end product. 	Portfolio activity 5.1 Collect samples of fabrics from the home or the market and unravel the yarns and study the following: • Yarn Twist • Direction of Twist • Amount of twist • Yarn Crimp	Know your progress 5.1 Make a chart to show the impact on the quality of cotton fabrics due to the following actions: • Yarn Twist • Amount of twist • Yarn Crimp	 Explains Yarn and it's properties on basis of the following : Yarn Twist Direction of Twist Amount of twist Yarn Crimp Appreciates the effect of yarn properties on end product.
Day 14	- properties	 5.4. How to make yarns? Process of making cotton yarn Cleaning and opening Carding Combing Drawing Spinning Winding 	Visit a cotton yarn making unit and study the different processes being used in the manufacturing cotton yarn. Collect samples of fibre at each stage and paste them in the practical file. Click pictures of each process and paste them in the practical file.	Write a detailed report of the observations during the visit.	Adopts the correct process of making cotton yarn.

Day 15	Process of making wool and worsted yarn. - Shearing - Sorting and Grading - Scouring - Carbonizing - Carding - Combing (Optional) - Drawing (Optional) - Spinning - Winding	Visit a wool yarn making unit and study the different processes being used in the manufacturing of wool yarn. Collect samples of fibre at each stage and paste them in the practical file. Click pictures of each process and paste them in the practical file.	Write a detailed report of the observations during the visit. With the help of flow chart, explain the process in involved in making wool and worsted yarn.	 Adopts the correct process of making wool and worsted yarn.
Day 16	Process of making silk yarn - Sorting - Softening of Sericin - Reeling - Throwing - Spinning - Degumming - Weighting	Visit a silk yarn making unit and study the different processes being used in the manufacturing of silk yarn. Collect samples of fibre at each stage and paste them in the practical file. Click pictures of each process and paste them in the practical file.	Practical 5.1 Know your progress 5.2 With the help of flow chart, explain the process in involved in making silk yarn. Write a detailed report of the observations during the visit.	 Adopts the correct process of making silk yarn.
Day 17	 Yarn count and yarn numbering system. Direct Yarn Number Denier Tex Indirect Yarn Number Cotton Count Woolen Count 	Identify the yarn count of the samples of cotton and silk fabrics provided.	Know your progress 5.3 Visit the local market and collect samples of cotton, wool and silk yarn and study the count and record your observations in the file.	 Undertakes Yarn count and yarn numbering system using : Direct Yarn Number Denier Tex

		Worsted CountMetric count			 Indirect Yarn Number
	6. Yarn and its types	 6.1. Classifications of yarn according to its length. Spun Yarn Natural Manmade Filament Yarn Monofilament Multifilament Textured Untextured 	Portfolio activity 6.1 Make a chart showing the classification of fibres according to length. Undertake group discussion on how the length of fibres impacts yarn and fabric quality.	Know your progress 6.1 Portfolio activity 6.2 Collect samples of fabrics woven using: • Spun yarn • Textured yarn • Monofilament yarn • Multifilament yarn. Write your observations on how these factors impact the luster and feel of the fabric.	Classifies yarns according to: - Length. - Spun Yarn - Natural - Manmade - Filament Yarn - Monofilament - Multifilament - Textured - Untextured -
		 6.2. Classifications of yarn according to yarn structure. Simple Yarn Complex/Novelty Yarn 6.3. Simple yarn Single Ply 	Practical 6.1 Visit a yarn making unit and study the different processes being used in the manufacturing of Simple and complex yarn. Collect samples of	Know your progress 6.2 With the help of flow chart, explain the process involved in making: Simple yarn - Single	Classifies yarn according to yarn structure. - Simple Yarn - Complex/Novelty Yarn
Day 18					

	- Cord	yarns being manufactured and paste them in the practical file. Click pictures of each process and paste them in the practical file.	- Ply - Cord Write a detailed report of the observations of the visit.	
Day 19	6.4. Complex yarn - Slub - Spiral - Nub/Not/Spot - Boucle, - Loop, - Curl - Chenille 6.5. End use of novelty yarns • Limitations of Novelty Yarns	Practical 6.1 Practical 6.2 Practical 6.3 Undertake group discussion to study the impact of complex and novelty yarns on end products and the limitations in using complex yarns	Know your progress 6.3 With the help of flow chart, explain the process in involved in making: Complex yarn - Slub - Spiral - Nub/Not/Spot - Boucle, - Loop, - Curl - Chenille Collect samples of fabrics made using Complex yarns and paste in the file	Demonstrates awareness about: - Complex yarns - End use of novelty yarns - Limitations of Novelty Yarns
Day 20	6.6. Yarn blending - Commonly available Blended Yarn/Fabrics	Portfolio activity 6.3 Undertake a Market Survey to study the types of Blended Fabrics available in the market and the reasons for their popularity	Hold small group discussions with the shopkeepers to find out which blended fabrics are popular and the reasons for their popularity. Collect samples of blended fabrics and	- Yarn blending - Commonly available Blended Yarn/Fabrics

				paste in the practical file. Write the types of fibres blended together and its benefits for the consumers.	
Day 21		 7.1. Fabric and its construction. 7.2. Weaving Common terms in weaving Warp Weft Selvedge Thread Count 	Practice the basic procedure of weaving using ribbons or strips of paper, Make samples of the weaving using coarser yarn (woolen yarn or cord)	Continue the practice and complete the samples and paste them in the practical file.	Demonstrates understanding and uses the Common terms in weaving.
Day 22	7. Emerging into Fabric	 7.3. Types of weaves A. Basic weaves Plain Weave Twill Weave Satin Weave 	Practical 7.1 Make samples of the weaves using coarser yarn (woolen yarn or cord)/ribbon/strips of paper	Continue the practice and complete the samples and paste them in the practical file. Visit the local market and practice the identification of different weave by visual examination.	Demonstrates the procedure of weaving the following Basic weaves: - Plain Weave - Twill Weave - Satin Weave
Day 23		 B. Decorative weaves Dobby Pile Leno Jacquard 	Make samples of the weaves using coarser yarn (woolen yarn or cord)/ribbon/strips of paper. Collect samples of fabrics made using different weaves and paste in practical file.	Portfolio activity 7.1 Know your progress 7.1 Continue the practice and complete the samples and paste them in the practical file. Visit the local market and practice the identification of different weave by visual	Demonstrates the procedure of weaving the following Decorative weaves: - Dobby - Pile - Leno - Jacquard

				examination.	
D 24					
Day 24		 7.4. Knitting Courses Wales 7.5. Non Woven Fabrics 7.6. Others Net Lace 7.7. Difference between Weaving and Knitting 	Visit a Knitted fabric manufacturing unit and study the different processes being used in their manufacturing. Collect samples of fabrics being manufactured and paste them in the practical file. Click pictures of each process and paste them in the practical file.	Undertake a Market Survey to study the types of Knitted Fabrics available in the market and the reasons for their popularity	Demonstrates the procedure of Knitting as a method of fabric making through variations of: - Courses - Wales Demonstrates the procedure of making Non Woven Fabrics Demonstrates the procedure of making Net, Lace.
Day 25	8. Fabric Finishes	 8.1. What is the finish Importance of Finishing 8.2. Classification of finishes. Temporary and Durable Routine(Basic) and Special 	Design and make a chart showing the Classification of finishes. • Temporary and Durable • Routine(Basic) and • Special	Know your progress 8.1 Hold small group discussions with the shopkeepers to find out which types of finished fabrics are popular and the reasons for their popularity. Collect samples of finished fabrics and paste in the practical file. Write a report on why finished fabrics are popular with the consumers.	Explains the Importance of Finishing fabrics Classifies of finishes as: - Temporary and Durable - Routine(Basic) and Special

		 8.3.Some common finishes- Routine finishes: Scouring/Cleaning Bleaching Stiffening Calendering 	Visit a fabric Finishing unit and study the different processes being used in their finishing. Collect samples of fabrics being finished and paste them in the practical file. Click pictures of each process and paste them in the practical file.	Know your progress 8.2 Hold small group discussions with the shopkeepers, family and friends to find out which type of finished fabrics are popular and the reasons for their popularity. Write a report on why finished fabrics are popular with the consumers.	Undertakes some common Routine finishes like : - Scouring/Cleaning - Bleaching - Stiffening - Calendering
Day 26		 Special finishes Mercerization Water Proofing Dyeing and Printing 	Visit a fabric Dyeing and Printing unit and study the different processes being used in Dyeing and Printing. Collect samples of fabrics and paste them in the practical file. Click pictures of each process and paste them in the practical file	Portfolio activity 8.1 Practice and make samples of dyeing and printing of fabrics and past in the practical file.	Undertakes some common Special finishes like: - Mercerization - Water Proofing - Dyeing and Printing
Day 27	Industry visit & preparation of report:				
Day 20	Yarn making unit				
Day 20	weaving unit				
Day 29	Finishing unit				
Day 30	Garment making unit				