

Training Schedule - Dyeing and Printing (671)

Total Contact Hours: 240 hrs (PCP(120 hrs) + Self Study (120hrs)
PCP- 120hrs (Theory (30hrs) + Practical (90hrs)

Session	Lesson	Theory (1 hour)	Practical (3 Hours)	Self study /Assignment	Learning Outcomes
Day 1	1.Colour on Textiles	1.1 Dyes & Pigments <ul style="list-style-type: none"> • Dyes • Pigments 1.2 Classification of Dyes <ul style="list-style-type: none"> • Natural Dyes • Synthetic Dye • Vegetable Dyes • Animal Dyes • Mineral Dyes 1.3 Mordants	Portfolio activity 1.1 Undertake a market survey to study the different types of dyes available in your neighbourhood. Write a report. Make a chart to show the different types of dyes used for dyeing of fabrics.	Know your progress 1.1 Collect the raw material of vegetables dyes available in your home and list against it the resulting colour it will give when used.	<ul style="list-style-type: none"> • Differentiates between dyes and pigments. • Enumerates the different types of dyes • Appreciates the role of mordant in dyeing and printing. • Elaborates the advantages and disadvantages of using different dyes. • Selects appropriate dyes and pigments
Day 2	...Colour on Textiles	1.4 Synthetic Dyes <ul style="list-style-type: none"> • Direct Dyes • Azoic Dyes • Vat Dyes • Reactive Dyes • Sulphur Dyes • Acid Dyes • Disperse Dyes • Basic Dyes 	Portfolio activity 1.2 Undertake a market survey and write a report on the different types of Synthetic dyes available in your neighbourhood.	Know your progress 1.2 Portfolio activity 1.3 Visit your neighbourhood dyer and find out the types of Synthetic dyes being used by. Also discuss the reasons for their preference.	

Day 3Colour on Textiles	1.4 Synthetic Dyes Continued	Practice continued	Know your progress 1.3	
Day 4	2. Essential Components of Dyeing	2.1 Theory of Dyeing <ul style="list-style-type: none"> • Migration • Adsorption • Absorption/Diffusion • Fixation 	Make a chart showing four stages of dyeing. Undertake simple dyeing and write your observation about the four stages of dyeing.	Know your progress 2.1 Using materials available in your home practice the procedure of the simple dyeing process.	<ul style="list-style-type: none"> • Appreciates the role of following in the process of dyeing: <ul style="list-style-type: none"> - Migration - Adsorption - Absorption/Diffusion - Fixation • Ensures effective dyeing by the maintenance of following parameters: <ul style="list-style-type: none"> - Temperature - pH - Time - Material to Liquor Ratio
Day 5	... Essential Components of Dyeing	2.2 Important parameters of dyeing <ul style="list-style-type: none"> • Temperature • pH • Time • Material to Liquor Ratio 	Portfolio activity 2.1 Group discussion on the effect of the different parameters of dyeing.	Portfolio activity 2.2 Know your progress 2.2 Practice of dyeing by varying the the important parameters of dyeing and record the impact of the variations you made.	<ul style="list-style-type: none"> • Enumerates the different Auxiliaries • Demonstrates the role of Auxiliaries in the dyeing process: <ul style="list-style-type: none"> - Wetting Agent • Chooses and uses appropriate Auxiliaries
Day 6	...Essential Components of Dyeing	2.3 Dyeing Auxiliaries <ul style="list-style-type: none"> • Wetting Agent • Leveling Agent • Electrolyte • Akali • Acid • Reducing Agent • Oxidizing Agent 	Portfolio activity 2.3 Undertake a market survey and write a report on the different types of Auxiliaries available in your neighborhood.	Know your progress 2.3 Visit your nearby dyer and study the types of Dye Auxiliaries he is using. Write a report on the reasons for his choice.	

Day 7	3. Stages of Colour Application on Textiles	<p>3.1 Stages of colour application.</p> <ul style="list-style-type: none"> • Fibre Stage • Yarn Stage • Fabric • Final Product Stage <p>YARN STAGE –</p> <ul style="list-style-type: none"> • Skein/Hank Dyeing • Package Dyeing • Beam Dyeing • Pre-decided Design Dyeing 	<p>Undertake the yarn and fibre dyeing process.</p> <p>Practice the yarn dyeing process at:</p> <ul style="list-style-type: none"> • Skein/Hank Dyeing • Package Dyeing • Beam Dyeing • Pre-decided Design Dyeing 	<p>Portfolio activity 3.1</p> <p>Continue the practice the yarn dyeing process at:</p> <ul style="list-style-type: none"> • Skein/Hank Dyeing • Package Dyeing • Beam Dyeing • Pre-decided Design Dyeing 	<ul style="list-style-type: none"> • Verbalizes the following stages of colour application: <ul style="list-style-type: none"> - Fibre Stage - Yarn Stage - Fabric - Final Product Stage • Undertakes yarn dyeing process at : <ul style="list-style-type: none"> - Skein/Hank Dyeing - Package Dyeing - Beam Dyeing - Pre-decided Design Dyeing • Prepares Portfolio for prepared work – attaching samples and corresponding procedures
Day 8	...Stages of Colour Application on Textiles	<p>3.2 Advantages and disadvantages of various stages</p> <ul style="list-style-type: none"> • Fibre • Yarn • Fabric • Garment 	<p>Make a chart showing the advantages and disadvantages of dyeing at different stages.</p> <p>Practice dyeing samples at various stages like:</p> <ul style="list-style-type: none"> • Fibre • Yarn • Fabric • Garment <p>Record your observations in the practical file.</p>	<p>Portfolio activity 3.2</p> <p>Know your progress 3.2</p> <p>Continue the practice dyeing samples at various stages like:</p> <ul style="list-style-type: none"> • Fibre • Yarn • Fabric • Garment <p>Record your observations</p>	<ul style="list-style-type: none"> • Prepares Portfolio for prepared work – attaching samples and corresponding procedures
Day 9	...Stages of Colour	<p>3.3 Design possibilities at different stages of dyeing</p>	<p>Create 2 samples each to create</p>	<p>Portfolio activity 3.3</p> <p>Continue practice of</p>	

	Application on Textiles	<ul style="list-style-type: none"> • Fibre Stage • Yarn Stage • Fabric • Finished Product 	different effects at: <ul style="list-style-type: none"> • Yarn Stage • Fabric • Finished Product 	creating different effects at: <ul style="list-style-type: none"> • Yarn Stage • Fabric • Finished Product 	
Day 10	4. Preparing Yarns/Fabrics for Dyeing and Printing	4.1 Importance of preparatory processes for dyeing and printing <ul style="list-style-type: none"> • Purpose of Preparatory Process • Functions of the Preparatory Process 	Study of differently processed fabric samples by visual examination and feel and recording of differences observed in the practical file. Practical 4.1	Know your progress 4.1 Undertake a market survey and write a report on the different types of preparatory processed fabrics being sold in your neighborhood.	Explains following in detail: <ul style="list-style-type: none"> - Purpose of Preparatory Process - Functions of the Preparatory Process - Importance of the Preparatory Process
Day 11	...Preparing Yarns/Fabrics for Dyeing and Printing	4.2 Preparatory processes for cotton fabric. <ul style="list-style-type: none"> • Desizing • Scouring • Bleaching – Process and Bleaching Agents • Mercerization 	Finish grey fabric using Desizing, Scouring and Bleaching and record the procedure against each sample.	Continue the practice of finishing grey fabric using Desizing, Scouring and Bleaching	Demonstrates the following preparatory processes for cotton: <ul style="list-style-type: none"> - Desizing - Scouring - Bleaching - Mercerization - Rot Seeping - Acid Desizing
Day 12	... Preparing Yarns/Fabrics for Dyeing and Printing	4.2 Preparatory processes for cotton fabric cont... <ul style="list-style-type: none"> • Rot Seeping • Acid Desizing • Mercerization 	Portfolio activity 4.1 Portfolio activity 4.2 Practical 4.2 Finish grey fabric using and Rot Seeping and Acid Desizing method. Record the	Portfolio activity 4.3 Continue the practice of finishing grey fabric using and Rot Seeping and Acid Desizing method.	Undertakes the following preparatory processes for silk:

			procedure against each samples.		<ul style="list-style-type: none"> - Degumming - Bleaching of different types of silk
Day 13	... Preparing Yarns/Fabrics for Dyeing and Printing	<p>4.3 Preparatory processes for Silk fabric</p> <ul style="list-style-type: none"> • Degumming • Bleaching for different types of Silk 	Practice the preparatory Process of Degumming of Silk and Bleaching of silk Practical 4.3	<p>Know your progress 4.3</p> <p>Paste the degummed and bleached samples and record the procedure in file.</p>	
Day 14	5. Art of Dyeing	<p>5.1 Choosing the correct dyeing process</p> <ul style="list-style-type: none"> • Factors affecting the choice of dye • Factors affecting the choice of method of dyeing • Dyeing Recipe/ Ingredients <p>5.2 Setting the dye bath</p> <ul style="list-style-type: none"> • Dye • Water • Auxillaries 	<p>Identifying and use appropriate tools and material for the dyeing process</p> <p>Identification and calculation for recipe of dyes.</p> <p>Practical 5.1</p> <p>Practice the setting up of the dye bath</p>	<p>Know your progress 5.1</p> <p>Know your progress 5.2</p> <p>Portfolio activity 5.1</p> <p>Collect pictures of different tools used for dyeing and paste in practical file.</p>	<ul style="list-style-type: none"> • Chooses and uses the correct procedure of dyeing for different types of fabrics • For dyeing of fabrics is aware of the following: <ul style="list-style-type: none"> - Factors affecting the choice of dyes - Factors affecting the choice of dyeing process • Uses the correct dyeing recipe and ingredients • Sets up the dye bath correctly • Observes correct procedures for the following: <ul style="list-style-type: none"> - Weighing fabric - Calculating dye and auxillaries - Pasting of dye - Setting up of dye bath
Day 15	...Art of Dyeing	Continuation of previous days activities			
Day 16	...Art of Dyeing	<p>5.3. Dyeing cycle</p> <ul style="list-style-type: none"> • Weighing fabric • Calculating dye and auxillaries • Pasting of dye 	<p>Practice the following:</p> <ul style="list-style-type: none"> • Weighing fabric • Calculating dye and 	<p>Portfolio activity 5.2</p> <p>Continue the of practice the following:</p> <ul style="list-style-type: none"> • Weighing fabric 	

		<ul style="list-style-type: none"> • Setting up of dye bath • Dyeing <p>a Direct dyes on cellulosic</p>	<p>auxillaries</p> <ul style="list-style-type: none"> • Pasting of dye • Setting up of dye bath • Dyeing <p>Undertake and practice the Dyeing cycle and the process of Direct dyes on cellulosic</p>	<ul style="list-style-type: none"> • Calculating dye and auxillaries • Pasting of dye • Setting up of dye bath • Dyeing <p>Record your observations in the practical file</p>	<ul style="list-style-type: none"> • Dyes cellulosic fabrics using : <ul style="list-style-type: none"> - Direct dyes - Reactive dyes • Dyes Silk fabrics using Acid dyes • VAT dyes cellulosic fabrics by: • Sulphur dyes cellulosics by the following processes: <ul style="list-style-type: none"> - Dyeing - Oxidation • Dyes Acrylics using Basic dyes
Day 17	...Art of Dyeing	<p>b. Reactive Dyes on cellulosic</p> <p>c. Acid dyes on silk</p> <p>d. VAT dyes on cellulosic</p> <ul style="list-style-type: none"> - Vatting - Dyeing - Oxidation 	<p>Undertake the practice of Reative Dyes on cellulosic and VAT dyes on cellulosic. Record the procedure and your observations in the practical file.</p>	<p>Practice to be continued.</p>	
Day 18	...Art of Dyeing	<p>Sulphur Dyes on cellulosic</p> <ul style="list-style-type: none"> - Dyeing - Oxidation <p>Basic dyes on Acrylic</p> <p>Azoic dyes on cellulosic</p>	<p>Undertake and practice the following</p> <ol style="list-style-type: none"> 1. Sulphur Dyes on cellulosic 2 Azoic dyes on cellulosic <p>Record the procedure and your observations in the practical file.</p>	<p>Know your progress 5.3</p> <p>Know your progress 5.5</p> <p>Practice to be continued.</p>	<ul style="list-style-type: none"> • Dyes Silk using Acid dyes • Safely Disposes the dye bath • Ensure Proper washing off dye of

			practice the method of Basic dyes on Acrylic and .Azoic dyes on cellulosic		<p>fabric</p> <ul style="list-style-type: none"> • Observes all prescribed precautions during Dyeing
Day 19	...Art of Dyeing	Acid dyes on silk Basic dyes on acrylic continued	Practical 5.2 Previous day activities to be continued	Practice to be continued.	
Day 20	...Art of Dyeing	5.4. Disposal of dye bath 5.5. Proper washing off Precautions while Dyeing	Observe the prescribed Rules and regulation regarding disposal of dye bath and practice it. Group discussion on the disposal of dye bath and the Standard procedure of effluent treatment plant.	<p>Know your progress 5.4</p> <p>Visit a dyeing unit and study the methods adopted by them with regard to :</p> <ul style="list-style-type: none"> • Disposal of dye bath • Proper washing off • Standard procedure of effluent treatment plant <p>Write a report on your observations</p>	
Day 21	6. Printing Patterns on Textiles	6.1. Printing of fabric 6.2. Composition of print paste	Identify and explain the different components of print	Know your progress 6.1 Portfolio activity 6.1	<ul style="list-style-type: none"> • Identifies and uses the correct Components of

			<p>paste</p> <p>Practical work 6.1</p> <p>Undertake a visit to two Printing units in your neighborhood and write a report of the visit</p>	<p>Know your progress 6.2</p> <p>Visit a printing unit and study the methods adopted by them with regard to Composition of print paste and record in the practical file</p>	<p>print paste</p> <ul style="list-style-type: none"> • Explains the different methods of printing fabrics
Day 22	Printing Patterns on Textiles	1. Methods of printing 6.3 a. Block Printing	<p>Practical work 6.2</p> <p>Practical work 6.3</p> <p>Make a chart to show the different methods of printing. Visit the local market and resource Blocks and materials for Block Printing. Visit a Block Printing unit to study the procedure of Block Printing and record it in the practical file</p>	<p>Portfolio activity 6.2</p> <p>Portfolio activity 6.3</p> <p>Know your progress 6.3</p> <p>Know your progress 6.4</p> <p>Practice Block Printing</p> <p>Collect designs for making Blocks and paste in the Practical file</p> <p>Paste samples made in the practical file</p>	<ul style="list-style-type: none"> • Prints fabrics by the following methods: <ul style="list-style-type: none"> - Block Printing - Screen Printing
Day 23	...Printing Patterns on Textiles	b. Screen Printing 6.4	<p>Practical work 6.4</p> <p>Visit the local market and resource materials for Screen Printing. Visit a Screen Printing unit to</p>	<p>Practice the following:</p> <ul style="list-style-type: none"> • Collecting Designs for Screen Printing • Making of 	-

			study the procedure of Screen Printing and record it in the practical file	<p>Screens</p> <ul style="list-style-type: none"> • Screen Printing <p>Paste samples made in the practical file</p>	
Day 24	7. Designing Fabrics through Printing	1. Technique of printing 7.1	Practical 7.3 Practical 7.4	Portfolio activity 7.1 Know your progress 7.1	<ul style="list-style-type: none"> • Adopts the different techniques of printing
Day 25	... Designing Fabrics through Printing	1. Variation of resist style of printing 2. Tie and Dye	Practical 7.1 Visit the local market and resource materials for Tie and Dye design . Visit a Tie and dye unit to study the procedure of Tie and dye and record it in the practical file	Portfolio activity 7.2 Know your progress 7.2 Collecting Designs for Tie and dye Practice the different methods of tying Practice Tie and dye Paste samples made in the practical file	<ul style="list-style-type: none"> • Prints fabric using the following styles of Resist Printing - Tie & Dye - Batik - Ikat
Day 26	...Designing Fabrics through Printing	1. Batik	Practical 7.2 Visit the local market and resource materials for Batik design . Visit a Batik unit to study the procedure of Batik and record it in the practical file	Collecting Designs for Batik Practice the different recipes of Wax and its application Practice Batik Paste samples made in the practical file	
Day 27	... Designing Fabrics through	Ikat	Collect resist yarn dyed woven sample of different states	Portfolio activity 7.3 Collecting Designs for Ikat	

	Printing		and tabulate the difference between them with regard to use of colours and motifs. Visit an Ikat unit to study the procedure of Ikat and record it in the practical file	Practice the different method of yarn tying Practice Ikat Paste samples made in the practical file	
Day 28	...Designing Fabrics through Printing	Latest development in printing	Visit an Ikat unit to study the procedure of Digital Printing and record it in the practical file Identify sample of : - Digital printing - Transfer printing - Polychromatic printing.	Know your progress 7.3 Practice to be continued of : - Digital printing - Transfer printing - Polychromatic printing	<ul style="list-style-type: none"> Plans, Adapts and implements the following latest developments in fabric printing: <ul style="list-style-type: none"> - Digital Printing - Transfer Printing Polychromatic printing
Day 29	8. Quality in Dyed and Printed Fabrics	Importance of quality assurance at all stages. Defects in dyed and printed fabrics.	Portfolio activity 8.1 Visit the local market and collect samples of Printed fabric and study them for defects in dyeing and printing Paste the samples and record your observation against	Know your progress 8.1 Know your progress 8.2 Undertake small group discussion on the defects commonly occurring in dyeing and printed fabrics	<ul style="list-style-type: none"> Assure quality at all stages of printing Identifies the commonly occurring defects in printed fabrics Reflects on the causes of defects Avoids defects in

			each sample		printing by the following methods:
Day 30	9.Quality in Dyed and Printed Fabrics	1. Causes for defects 8.3 2. Colour fastness 8.4	Practical 8.1, Practical 8.2 Practical 8.3 Group discussion on methods of overcoming defects in dyeing and printing and assuring colour fastness	Portfolio activity 8.2 Know your progress 8.3 overcome the defects commonly occurring in dyeing and printed fabrics Undertake small group discussion with dyeing and printing units on how to overcome the defects commonly occurring in dyeing and printed fabrics and ensure colour fastness.	<ul style="list-style-type: none"> - Selecting fabric appropriate dyes and pigments - Preparing dyes of right shade, tone and consistency - Correct placement of design - Printing in the right direction and maintaining continuity - Fixing colours by using appropriate techniques • Ensures colour fastness in dyeing and printing