

	<p style="text-align: center;">MAHATMA GANDHI UNIVERSITY Kottayam, Kerala</p> <p style="text-align: center;">Undergraduate Programmes (HONOURS) 2024 Admission Onwards</p>
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SYLLABUS						
SIGNATURE COURSE						
Name of the College	KMM College of Arts & Science, Thrikkakara					
Faculty/ Discipline	Textiles					
Programme	-					
Course Coordinator	Kavya v Prathapan					
Contributors	Susan Mathew, Viji Viswan, Amanda Simon, Kavya V Prathapan					
Course Name	CHEMICAL PROCESSING IN TEXTILES					
Type of Course	VAC					
Specialization title	This Signature Course does not have a specialization.					
Course Code	MG3VACTXLA01					
Course Level	200					
Course Summary	The course gives students a thorough understanding of the methods and procedures used to treat textiles with dyes and chemicals. Phases from pre-treatment to completion, are discussed, with a focus on theoretical comprehension.					
Semester	3	Credits			3	Total Hours
Course Details	Learning Approach	Lecture	Tutorial	Practical	Others	
		3	0	0	0	
Pre-requisites, if any	Basic knowledge on fabrics.					

Course Outcomes (CO)

Number of COs		5	
CO No.	Expected Course Outcome	Learning Domains *	PO No
1	Classify textile finishes.	U	PO2, PO4
2	Describe basic routine finishes, aesthetic finishes and functional finishes.	U	PO2, PO4
3	Explain methods and stages of dyeing.	U	PO2, PO4
4	Explain methods and styles of printing.	U	PO2, PO4
5	Write a report on the industrial visit.	A	PO4, PO5, PO9, PO10

*Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Skill (S), Interest (I) and Appreciation (Ap)

CO-PO Articulation Matrix

CO/PO	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10
CO 1	-	2	-	3	-	-	-	-	-	-
CO 2	-	2	-	3	-	-	-	-	-	-
CO 3	-	2	-	3	-	-	-	-	-	-
CO 4	-	2	-	3	-	-	-	-	-	-
CO 5	-	-	-	3	3	-	-	-	3	3

'0' is No Correlation, '1' is Slight Correlation (Low level), '2' is Moderate Correlation (Medium level) and '3' is Substantial Correlation (High level).

Course Content

Content for Classroom transaction (Units)

Module	Units	Course Description	Hrs	CO No.
1	Introduction to Textile Finishes & its Classification			
	1.1	Basic Routine Finishes- Singeing, Sizing, Scouring, Bleaching, Weighting, Calendaring, Tentering, Mercerization.	4	["1", "2"]
	1.2	Aesthetic finishes- Special Calendaring- Schreinerizing, moire', embossed surfaces, Beetling, Raised surface finishes- Napping, Giggling, Sueding, Emerizing, Flocking, Brushing and Shearing.	5	["1", "2"]
	1.3	Functional finishes- Water repellent, Water proof, Flame resistant, Stain/Soil resistant, Shrink resistant, Durable press, Moth proof, Antimicrobial, finishes. Nano technology and plasma technology in finishing.	6	["1", "2"]
2	Introduction to Colouration- Dyeing and Printing			
	2.1	Dye Classification-Natural & Synthetic Dye classes-Acid dyes, Basic dyes, Disperse dyes, Vat dyes, Azoic Dyes, Direct Dyes, Reactive Dyes Stages of Dyeing- Solution dyeing, Fibre dyeing, Yarn dyeing, Piece dyeing, Product dyeing.	4	["3", "4"]
	2.2	Methods of Dyeing- Stock, Top, Dope, Skein, Package, Beam, Winch, Jet, Jig, Pad, Cross, Union, Dip, Paddle Dyeing.	6	["3", "4"]
	2.3	Basic Styles of Printing – Direct, Resist, Discharge, Mordant, Transfer printing.	5	["3", "4"]
	2.4	Methods of Printing- Block, Roller, Stencil, Screen, Heat transfer, Jet, Digital printing.	5	["3", "4"]
3	Industry Visit			
	3.1	Visit to an industry to observe the chemical processing in textiles and submit a team report.	10	["5"]

Teaching and Learning Approach	Classroom Procedure (Mode of transaction) M1 and M2 - Lecture. M3 - Industry Visit.
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Assessment Types	MODE OF ASSESSMENT Mode of Assessment: Theory
	A. Continuous Comprehensive Assessment (CCA) • Theory - 25 Marks Formative Assessment (FA)-Oral Presentation/ Quiz/ Home Assignment, Summative Assessment (SA)-Industrial Visit Report
	B. End Semester Evaluation (ESE) • Theory - 50 Marks Assessment Methods - Written Examination Duration of Examination - 1.50 Hrs Pattern of examination for Theory - Non-MCQ Different parts of written examination - Part - A , B , C , D , E Answer Type: ◦ PART - A ◦ MCQ - (10 out of 10) - $10 \times 1 = 10$ ◦ PART - B ◦ Fill in the blanks - (10 out of 10) - $10 \times 1 = 10$ ◦ PART - C ◦ One word or One sentence - (10 out of 10) - $10 \times 1 = 10$ ◦ PART - D ◦ Short answer - (5 out of 6) - $5 \times 2 = 10$ ◦ PART - E ◦ Long Answers - (2 out of 4) - $2 \times 5 = 10$

References

- 1. Corbman, B. P. (1983). Textiles: Fiber to Fabrics. Mcgraw-Hill. 2. Kogent Learning Solutions Inc. (2010). Comdex Fashion Design, Vol 1, Fashion Concepts. 3. Joseph, M. L. (1988). Essentials of Textiles. Holt, Rinehart, And Winston. 4. Jerde, J. (1992). Encyclopedia of Textiles.

Suggested Readings

- 1. Kadolph, S. J., and Marcketti, S. B. (2017). Textiles. Pearson. 2. Hargrave, H. (1997). From Fiber to Fabric. C and T Publishing Inc.

Affidavit

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