Faculty of Design
Masters of Design (Fashion Design) (Sem-I)
In effect from Academic Year 2026-27

Branch Name	Master of Design (Fashion Design)
Branch Code	FD201
Course Name:	Structural Textile Design and Weaving
Course Code	2FD2010102
Pre-requisite Course:	-------

Course Objectives:

1. To understand the principles of woven fabric construction and the relationship between yarn, weave, texture, and fabric performance.
2. To develop skills in weave design and structural textile development using conventional and advanced weaving techniques.
3. To explore loom technologies and innovative woven structures for creating functional and aesthetic textile products.
4. To design and develop creative woven textiles for fashion and allied industries, integrating technical knowledge with design innovation.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)								Total (Marks)
				Theory (Marks)				Practical (Marks)				
				University Assessment		Continuous Assessment		University Assessment		Continuous Assessment		
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
-	-	4	2	-	-	-	-	10	25	10	25	50

Subject Content:

Sr.No	Topic	Total Hours	Weightage (%)
1	Fundamentals of Structural Textile Design • Introduction to structural textile design • Elements and principles of woven textile structures • Classification of woven fabrics • Warp, weft, sett, cover factor, and fabric geometry • Yarn characteristics and their influence on fabric structure • Basic and derivative weaves o Plain weave o Twill weave o Satin and sateen weave • Fabric analysis and weave notation	6	25%
2	Advanced Weave Construction and Surface Development • Derivative and combined weave structures • Extra warp and extra weft designs • Pile fabrics and terry structures • Honeycomb, crepe, Bedford cord, and pique weaves • Double cloth and multilayer fabrics • Textural effects through weave manipulation • Structural surface ornamentation techniques	6	25%
3	Weaving Technologies and Digital Applications • Advanced loom technologies	6	25%

	• Shuttle and shuttleless weaving systems • Jacquard weaving principles • Dobby mechanisms and applications • Computer-Aided Weave Design (CAD)		
4	Woven Textile Collection Development • Research methodologies for woven textile design • Trend forecasting and market analysis • Concept and theme development • Textile sampling and prototype development • Sustainable woven textile design • Collection planning and merchandising • Portfolio preparation and professional presentation • Industry applications in fashion, interiors, and technical textiles	6	25%

Reference Books:

S.No	Books
1	Woven Fabric Structure: Design and Product Planning – Y. S. Gokarneshan, New Age International Publishers, 2004.
2	Fabric Structure and Design – M. P. Grover & D. S. Tyagi, Walia Book House, 2015.
3	Fundamentals of Textiles and Their Care – G. K. Ghosh, PHI Learning, 2005.

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom Taxonomy Level
CLO1	the relationship between yarn characteristics, weave structures, and fabric properties in textile design.	1 Remembering
CLO2	Develop woven designs using fundamental and advanced weave construction techniques.	2 Understanding
CLO3	Apply weaving principles and loom technologies to create functional and aesthetic textile structures.	3 Applying
CLO4	Design and develop innovative woven textile samples for fashion and allied industries.	4,5 Evaluate, Analyse
CLO5	Integrate technical knowledge and creative exploration to produce contemporary woven textile solutions.	6 Creative

Mapping of CLOs with Pos &PSOs

Course	Program Outcomes (PO's)										Program Specific Outcomes (PSO)	
Learning Outcomes	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PSO 1	PSO 2
CLO 1	L			H							M	
CLO 2		M				L	L					
CLO 3			M		M					H		M
CLO 4	H							M			M	
CLO 5		M			L	M			L			L
CLO 6				H	H				H	M	H	

H: High, M: Medium, L: Low