

**M.D. UNIVERSITY  
ROHTAK**

**SYLLABUS**

**FOR**

**PRE-PH.D (FASHION & APPAREL ENGG.)**

**MAHARSHI DAYANAND UNIVERSITY,  
ROHTAK**

**SCHEME OF STUDIES AND EXAMINATION**

**FASHION AND APPAREL ENGINEERING**

**Pre-Ph.D Scheme w.e.f 2012-13**

**SEMESTER-FIRST**

Course No.	Course Title	Teaching Schedule				Marks of Class work	Examination		Total Marks	Duration of Exam
		L	T	P	Total		Theor y	Practical		
	<b>FASHION &amp; APPAREL ENGINEERING</b>									
PhD-FAE-101	Advanced Garment Designing Concept	3	1	-	4	20	80	-	100	3
PhD-FAE-103	Modern Technology of Apparel Production and Management	3	1	-	4	20	80	-	100	3
<b>Total</b>		<b>3</b>	<b>1</b>	<b>-</b>	<b>4</b>	<b>20</b>	<b>80</b>	<b>-</b>	<b>100</b>	

- NOTE: i) Only one paper will be chosen from the above courses**  
**ii) Class work consists of two assignments of 10 marks each.**  
**iii) Candidates will have to attempt five questions of each consisting of 16 marks**  
**iv) Q1 will be compulsory with objective type of questions**

**PhD-FAE-101          Advanced Garment Designing Concepts**

L	T	P	Class work	:	20
3	1	-	Examination	:	80
			Total	:	100
			Exam duration:		3 hrs

NOTE: Examiner will set 9 questions in total, with two questions from each unit and one question covering all sections which will be Q.1. This Q.1 is compulsory and of short answers type. Each question carries equal mark (16 marks). Students have to attempt 5 questions in total at least one question from each unit

**Unit I**

Textile Design function, Geometrical Principles of apparel Construction, Use of basic design elements in motif, pattern, fabric and garment design generation. Geometry of patterns, Placement of patterns by various combining techniques via translation, rotation etc. to create fabric design.

**Unit II**

Techniques of design generation by weaving, dyeing and Printing e.g. brocades, Ikat, batik, kalamkari, Home fashion textiles, Quilt Designing- Types of fabrics, weddings, geometrical and resist dyed quilts patterns, Bed sheet designing-cut and spread techniques, Towels and Carpets.

**Unit III**

Requirements and advantages of computer assisted technologies in garment industry. Introduction to CAD/ CAM and CIM, Fashion illustration and portfolio presentation via Patterns insertions and modifications, special effects brushes, color modifications etc., Fashion marketing concept, Fashion Promotion Mix.

**Unit IV**

Usage of Computer in Body Size-chart generation, Pattern making, Spreading, Cutting, Sewing & assembling, Finishing operations in garment industry via study of commercial machine models used in industry. Introduction to management planning and information, Management Information System, ERP (Enterprise resource Planning), PLM (Product Life Management) software for fashion articles

E- Retailing, Usage of computers as Quick response strategies in fashion Industry.

**Reading List**

<u>Title</u>	<u>Author</u>
CAD in clothing and Textiles	Winifred Aldrich
Computers in fashion Industry	Patric Taylor
Adobe Photoshop for fashion Design	Susan L
The Technology of Clothing Manufacture	Harold Carr & B Latham
Geometry of patterns	Stanley Bezuszka
Fabric, form and flat pattern Cutting	Winifred Aldrich

**PhD-FAE-103                      Modern Technology of Apparel Production and Management**

L        T        P  
3        1        -

Class work        :        20  
Examination     :        80  
Total                :        100  
Exam duration:     3 hrs

NOTE: Examiner will set 9 questions in total, with two questions from each unit and one question covering all sections which will be Q.1.

This Q.1 is compulsory and of short answers type. Each question carries equal mark (16 marks). Students have to attempt 5 questions in total at least one question from each unit

**Unit I**

Introduction to nonwovens, Fibre preparation processes. Web formation processes. Web bonding processes. Finishing processes. Knitting and knitwear: Manufacturing of single jersey, rib, purl and interlock weft knit fabrics. Properties of these fabrics, Manufacturing of Tricot and Rashal fabrics and properties of these fabrics, Knitwear manufacturing, their design, properties and application

**Unit II**

Modern Apparel production: Modern marker planning, spreading, cutting, sewing, pressing and delivery techniques. Different types of Softwares used for modern apparel production techniques.

**Unit III**

Basic concepts of production & operation, Macro and micro level planning with special reference to apparel industry, Production scheduling & control, PERT/CPM Management Information system, Concept of ERP and its application

**Unit IV**

Application of Industrial Engineering in Apparel industry, Method of conducting Work study, Time study and method study with special reference to apparel industry, Ergonomics in garment industry. Social accountability and its impact, Implementation of SA-8000 in Industry

**Reading List**

Title

Author

Nonwoven Textiles	Radko Krecma
Manual of Nonwovens	Radko Krecma
Handbook of Nonwovens	S Russels
Knitting Technology	DJ Spencer
Knitting Technology	DB Ajgaonkar
The Technology of Clothing Manufacture	Harold Carr & B Latham
Production and Operation Management	NG Nair
Production and Operation Management	S N Charry
Production Management	KC Batra
Production and Operation Management, Concept, Model and Behaviour	E Adams
Industrial Engineering & Production Management	Martland Telsang

**MAHARSHI DAYANAND UNIVERSITY,  
ROHTAK SCHEME OF STUDIES AND  
EXAMINATION**

**FASHION AND APPARELENGINEERING**

**Pre-Ph.D Scheme w.e.f 2012-13**

**SEMESTER-SECOND**

Course No.	Course Title	Teaching Schedule				Marks of Class work	Examination		Total Marks	Duration of Exam
		L	T	P	Total		Theory	Practical		
	<b>Fashion and Apparel Engineering</b>									
PhD-FAE-102	Research Methodology	3	1	-	4	20	80	-	100	3
PhD-FAE-104	SEMINAR		-	2	2	100	-	-	100	
<b>Total</b>		<b>3</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>120</b>	<b>80</b>	<b>-</b>	<b>200</b>	

- NOTE:** i) Research Methodology paper is common for all streams  
ii) Class work consists of two assignments of 10 marks each.  
iii) Candidates will have to attempt five questions of each consisting of 16 marks  
iv) Q1 will be compulsory with objective type of questions  
v) Seminar topic will be chosen as pre-project work

**PhD FAE-102 Research Methodology**

L      T      P  
3      1      -

Class work      :      20  
Examination      :      80  
Total                :      100

Exam duration:      3 Hrs

**Course contents are same as in other streams**

**PhD FAE-104 SEMINAR**

L      T      P  
-      -      2

Class work      :      100  
Examination      :      -  
Total                :      100  
Exam duration:      -

Each student will have to deliver a talk on the topics, in the weekly period allotted to the subject pertaining to his/her project work or any topic assigned by Head of the Department.

*The performance of the speaker would be judged in the class by Board of Examiners.*