

BANASTHALI VIDYAPITH

Master of Arts (Textile Designing - Weaving)
Master of Arts (Textile Designing - Printing)



Curriculum Structure

First Semester Examination, December, 2019
Second Semester Examination, April/May, 2020
Third Semester Examination, December, 2020
Fourth Semester Examination, April/May, 2021

BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH
(Rajasthan)-304022

July, 2019

107

No. F. 9-6/81-U.3

**Government of India
Ministry of Education and Culture
(Department of Education)**

New Delhi, the 25th October, 1983

NOTIFICATION

In exercise of the powers conferred by Section 3 of the University Grants Commission Act, 1956 (3 of 1956) the Central Government, on the advice of the Commission, hereby declare that Banasthali Vidyapith, P. O. Banasthali Vidyapith, (Rajasthan) shall be deemed to be a University for the purpose of the aforesaid Act.

Sd/-

(M. R. Kolhatkar)

Joint Secretary of the Government of India

NOTICE

Changes in Bye-laws/Syllabi and Books may from time to time be made by amendment or remaking, and a Candidate shall, except in so far as the Vidyapith determines otherwise, comply with any change that applies to years she has not completed at the time of change.

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Programme Educational Objectives

The M.A. in Textile Design Programme offers courses that endeavor to develop student's Knowledge and skills in specialized fields of **Fabric Weaving and Printing**.

The curriculum has identified essential competencies in the respective areas for which holistic education will be provided to the students.

The main objectives of the Master of Arts in Textile Design Programme are:

- To impart knowledge and develop capacities of the students through industry oriented higher education with in-depth study of Weaving and Printing.
- To develop the capability of critical and analytical thinking and encourage the students to pursue Research in the areas of Textiles.
- The over-all emphasis is to build confidence in their professional field.

Programme Outcomes

- PO1: Industry Orientation:** To make students Industry-oriented in Textile Design (Weaving & Printing)
- PO2: Indian Textiles and values:** To impart knowledge about Indian Textile Industry and Indian Values
- PO3: Modern Equipment usage:** To inform students about the limitations of equipment and textile processes in India
- PO4: Market Awareness:** To make students aware of Markets and future Design Trends
- PO5: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO6: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of Textile Design and technology.

Curriculum Structure

Master of Arts (Textile Designing - Weaving)

First Year

Semester - I

Course Code	Course Name	L	T	P	C*
ENVS 408	Environmental Studies	2	0	0	2
TXTD 404L	Creative Thinking Lab	0	0	8	4
TXTD 405	Design Research and Methodology	4	0	0	4
TXTD 408	Design Technique Printing	4	0	0	4
TXTD 408L	Design Technique Printing Lab	0	0	2	1
TXTD 409	Design Technique Weaving	4	0	0	4
TXTD 409L	Design Technique Weaving Lab	0	0	2	1
TXTD 412L	Visual Research and Development Lab	0	0	8	4
CS 420	Fundamentals of Computer	2	0	0	2
CS 420L	Fundamentals of Computer Lab	0	0	2	1
Semester Total:		16	0	22	27

Semester - II

Course Code	Course Name	L	T	P	C*
TSKL 402	Communication Skills and Presentation Techniques	4	0	0	4
TXTD 402L	Computer Aided Textile Designing (Weaving) - I Lab	0	0	4	2
TXTD 403	Conceptual Design	2	0	0	2
TXTD 403L	Conceptual Design Lab	0	0	6	3
TXTD 407L	Design Studio (Weaving) - I Lab	0	0	10	5
TXTD 410	Fundamentals of Marketing	4	0	0	4
TXTD 411	Indian Textiles	4	0	0	4
TXTD 411L	Indian Textiles Lab	0	0	2	1
Semester Total:		14	0	22	25

Second Year

Semester - III

Course Code	Course Name	L	T	P	C*
TXTD 502L	Computer Aided Textile Designing (Weaving) - II Lab	0	0	8	4
TXTD 503L	Design Studio (Weaving) - II Lab	0	0	12	6
TXTD 505	Fundamentals of Fashion Merchandising	4	0	0	4
TXTD 510L	Textile Testing and Assurance Lab	0	0	4	2
TXTD 509	Trends and Forecasting	2	0	0	2
TXTD 509L	Trends and Forecasting Lab	0	0	2	1
	Discipline Elective (Weaving)	0	0	4	2
	Open Elective	0	0	4	2
Semester Total:		6	0	34	23

Semester - IV

Course Code	Course Name	L	T	P	C*
TXTD 517P/	UIL Project/Dissertation	0	0	48	24
TXTD 512D	Reading Elective	0	0	0	2
Semester Total:		0	0	48	26

List of Discipline Elective

Course Code	Course Name	L	T	P	C*
Textile Design					
TXTD 511L	Digital Printing method and process	0	0	4	2
TXTD 513L	Dobby Pattern Making	0	0	4	2
TXTD 514L	Innovative Design Techniques	0	0	4	2
TXTD 515L	Point Graph Designing	0	0	4	2
TXTD 516L	Textile Illustration Techniques	0	0	4	2
TXTD 518L	Waste fabric Installation	0	0	4	2

List of Reading Elective

Course Code	Course Name	L	T	P	C*
DES 432R	Introduction to Behavioral Science	0	0	0	2
DES 433R	Introduction to Intellectual property Rights (IPR)	0	0	0	2
TXTD 523R	Fundamental of Retail Management	0	0	0	2
CS 434R	Management Information System	0	0	0	2

Curriculum Structure

Master of Arts (Textile Designing - Printing)

First Year

Semester - I

Course Code	Course Name	L	T	P	C*
ENVS 408	Environmental Studies	2	0	0	2
TXTD 404L	Creative Thinking Lab	0	0	8	4
TXTD 405	Design Research and Methodology	4	0	0	4
TXTD 408	Design Technique Printing	4	0	0	4
TXTD 408L	Design Technique Printing Lab	0	0	2	1
TXTD 409	Design Technique Weaving	4	0	0	4
TXTD 409L	Design Technique Weaving Lab	0	0	2	1
TXTD 412L	Visual Research and Development Lab	0	0	8	4
CS 420	Fundamentals of Computer	2	0	0	2
CS 420L	Fundamentals of Computer Lab	0	0	2	1
Semester Total:		16	0	22	27

Semester - II

Course Code	Course Name	L	T	P	C*
TSKL 402	Communication Skills and Presentation Techniques	4	0	0	4
TXTD 401L	Computer Aided Textile Designing (Printing) - I Lab	0	0	4	2
TXTD 403	Conceptual Design	2	0	0	2
TXTD 403L	Conceptual Design Lab	0	0	6	3
TXTD 406L	Design Studio (Printing) - I Lab	0	0	10	5
TXTD 410	Fundamentals of Marketing	4	0	0	4
TXTD 411	Indian Textiles	4	0	0	4
TXTD 411L	Indian Textiles Lab	0	0	2	1
Semester Total:		14	0	22	25

Second Year

Semester - III

Course Code	Course Name	L	T	P	C*
TXTD 501L	Computer Aided Textile Designing (Printing) - II Lab	0	0	8	4
TXTD 504L	Design Studio (Printing) - II Lab	0	0	12	6
TXTD 505	Fundamentals of Fashion Merchandising	4	0	0	4
TXTD 510L	Textile Testing and Assurance Lab	0	0	4	2
TXTD 509	Trends and Forecasting	2	0	0	2
TXTD 509L	Trends and Forecasting Lab	0	0	2	1
	Discipline Elective (Printing)	0	0	4	2
	Open Elective	0	0	4	2
Semester Total:		6	0	34	23

Semester - IV

Course Code	Course Name	L	T	P	C*
TXTD 517P/	UIL Project/Dissertation	0	0	48	24
TXTD 512D	Reading Elective	0	0	0	2
Semester Total:		0	0	48	26

List of Discipline Elective

Course Code	Course Name	L	T	P	C*
Textile Design					
TXTD 511L	Digital Printing method and process	0	0	4	2
TXTD 513L	Dobby Pattern Making	0	0	4	2
TXTD 514L	Innovative Design Techniques	0	0	4	2
TXTD 515L	Point Graph Designing	0	0	4	2
TXTD 516L	Textile Illustration Techniques	0	0	4	2
TXTD 518L	Waste fabric Installation	0	0	4	2

List of Reading Elective

Course Code	Course Name	L	T	P	C*
DES 432R	Introduction to Behavioral Science	0	0	0	2
DES 433R	Introduction to Intellectual property Rights (IPR)	0	0	0	2
DES 523R	Fundamental of Retail Management	0	0	0	2
DES 434R	Management Information System	0	0	0	2

*** L - Lecture hrs/week; T - Tutorial hrs/week;
P-Project/Practical/Lab/All other non-classroom academic activities, etc. hrs/week; C - Credit Points of the Course**

Student can opt open (Generic) elective from any discipline of the Vidyapith with prior permission of respective heads and time table permitting.

Every Student shall also opt for:

Five Fold Education: Physical Education I, Physical Education II,
Five Fold Education: Aesthetic Education I, Aesthetic Education II,
Five Fold Education: Practical Education I, Practical Education II
one each semester

Five Fold Activities

Fine Arts		Physical Education and Sports	
BVFF 101	Classical Dance (Bharatnatyam)	BVFF 201	Aerobics
BVFF 102	Classical Dance (Kathak)	BVFF 202	Archery
BVFF 103	Classical Dance (Manipuri)	BVFF 203	Athletics
BVFF 104	Creative Art	BVFF 204	Badminton
BVFF 105	Folk Dance	BVFF 205	Basketball
BVFF 106	Music-Instrumental (Guitar)	BVFF 206	Cricket
BVFF 107	Music-Instrumental (Orchestra)	BVFF 207	Equestrian
BVFF 108	Music-Instrumental (Sarod)	BVFF 208	Flying - Flight Radio Telephone Operator's Licence (Restricted)
BVFF 109	Music-Instrumental (Sitar)	BVFF 209	Flying - Student Pilot's Licence
BVFF 110	Music-Instrumental (Tabla)	BVFF 229	Aeromodelling
BVFF 111	Music-Instrumental (Violin)	BVFF 210	Football
BVFF 112	Music-Vocal	BVFF 211	Gymnastics
BVFF 113	Theatre	BVFF 212	Handball
		BVFF 213	Hockey
	Social Service and Extension Activities	BVFF 214	Judo
BVFF 301	Banasthali Sewa Dal	BVFF 215	Kabaddi
BVFF 302	Extension Programs for Women Empowerment	BVFF 216	Karate – Do
BVFF 303	FM Radio	BVFF 217	Kho-Kho
BVFF 304	Informal Education	BVFF 218	Net Ball
BVFF 305	National Service Scheme	BVFF 219	Rope Mallakhamb
BVFF 306	National Cadet Corps	BVFF 220	Shooting
		BVFF 221	Soft Ball
		BVFF 222	Swimming
		BVFF 223	Table Tennis
		BVFF 224	Tennis
		BVFF 225	Throwball
		BVFF 226	Volleyball
		BVFF 227	Weight Training
		BVFF 228	Yoga

Evaluation Scheme and Grading System

Continuous Assessment (CA)					End-Semester Assessment (ESA)	Grand Total (Max. Marks)
(Max. Marks)						
Assignment		Periodical Test		Total (CA)	(Max. Marks)	
I	II	I	II			
10	10	10	10	40	60	100

In all theory, laboratory and other non classroom activities (project, dissertation, seminar, etc.), the Continuous and End-semester assessment will be of 40 and 60 marks respectively. However, for Reading Elective, only End semester exam of 100 marks will be held. Wherever desired, the detailed breakup of continuous assessment marks (40), for project, practical, dissertation, seminar, etc shall be announced by respective departments in respective student handouts.

Based on the cumulative performance in the continuous and end-semester assessments, the grade obtained by the student in each course shall be awarded. The classification of grades is as under:

Letter Grade	Grade Point	Narration
O	10	Outstanding
A+	9	Excellent
A	8	Very Good
B+	7	Good
B	6	Above Average
C+	5	Average
C	4	Below Average
D	3	Marginal
E	2	Exposed
NC	0	Not Cleared

Based on the obtained grades, the Semester Grade Point Average shall be computed as under:

$$SGPA = \frac{CC_1 * GP_1 + CC_2 * GP_2 + CC_3 * GP_3 + \dots + CC_n * GP_n}{CC_1 + CC_2 + CC_3 + \dots + CC_n} = \frac{\sum_{i=1}^n CC_i * GP_i}{\sum_{i=1}^n CC_i}$$

Where n is the number of courses (with letter grading) registered in the semester, CC_i are the course credits attached to the i^{th} course with letter grading and GP_i is the letter grade point obtained in the i^{th} course. The courses which are given Non-Letter Grades are not considered in the calculation of SGPA.

The Cumulative Grade Point Average (CGPA) at the end of each semester shall be computed as under:

$$CGPA = \frac{CC_1 * GP_1 + CC_2 * GP_2 + CC_3 * GP_3 + \dots + CC_n * GP_n}{CC_1 + CC_2 + CC_3 + \dots + CC_n} = \frac{\sum_{i=1}^n CC_i * GP_i}{\sum_{i=1}^n CC_i}$$

Where n is the number of all the courses (with letter grading) that a student has taken up to the previous semester.

Student shall be required to maintain a minimum of 4.00 CGPA at the end of each semester. If a student's CGPA remains below 4.00 in two consecutive semesters, then the student will be placed under probation and the case will be referred to Academic Performance Review Committee (APRC) which will decide the course load of the student for successive semester till the student comes out of the probationary clause.

To clear a course of a degree program, a student should obtain letter grade C and above. However, D/E grade in two/one of the courses throughout the UG/PG degree program respectively shall be deemed to have cleared the respective course(s). The excess of two/one D/E course(s) in UG/PG degree program shall become the backlog course(s) and the student will be required to repeat and clear them in successive semester(s) by obtaining grade C or above.

After successfully clearing all the courses of the degree program, the student shall be awarded division as per following table.

Division	CGPA
Distinction	7.50 and above
First Division	6.00 to 7.49
Second Division	5.00 to 5.99
Pass	4.00 to 4.99

CGPA to % Conversion Formula: % of Marks Obtained = CGPA * 10

First Semester

ENVS 408 Environmental Studies

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
2	0	0	2

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Behave in day to day lifestyle according to eco system.
- Implement the knowledge to produce eco friendly design.
- Able to think about environmental issues and their solutions and implement in their domain work.

Theory:

Section A

Introduction to Environmental Science and Ecosystem

1. Definition, scope and importance.
2. Concept of Ecosystem, Structure of Ecosystem (Biotic & A biotic factors)
3. Brief idea of energy flow.

Natural Resources and their conservation

1. Renewable and non-renewable resources.
2. Uses and over utilization/ exploitation of Natural resources: Forest, Water, Mineral, Food, Energy and Land.
3. Water conservation & management, Rain water harvesting.
4. Elementary idea of solid wastes management.

Section B

Biodiversity and its Conservation

Definition, Types and Importance of Biodiversity.

Environmental Pollution and other Problems

1. Definition, Causes, Effects of air, water, soil, noise, thermal and nuclear pollution.
2. Control and preventive measures of air, water, soil, noise, thermal and nuclear pollution.

- Global problems: Climate change, global warming, Ozone layer depletion, Acid Rain and Photochemical Smog.

Section C

- Environmental pollution and its effect on Health and life forms; Social relevance of need & Environmental issues; Concept of Eco friendly Textiles goods.
- Ecological aspects of fabrics, dyes, chemicals & packaging; Eco. lable, standards, quality control, strategy, information systems; Concept of recycling materials & their visual aspects

Recommended Books :

- S.V.S. Rana, (2004). *Environmental Studies*, Rastogi Publications, Meerut.
- P. Bakre, V. Bakre and V. Wadhwa. (2005), *Paryavarniya Adhyayan*, Rastogi Publications, Meerut.
- E. Bharucha, (2005). *Environmental Studies*. University Press, Hyderabad.
- G. R. Chatisel and H. Sharma. (2005). *A Text Book of Environmental Studies*. Himalaya Publishing House, Delhi.
- J. P. Sharma. (2005). *Environmental Studies*, Laxmi Publications Ltd., Jalandhar

TXTD 404L Creative Thinking Lab

Max. Marks : 100

(CA: 40 + ESA: 60)

L T P C

0 0 8 4

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Develop the ability to understand design thinking process to give design solutions for society problems.
- Learn material handling and the difference between 2D to 3D
- Implement their creative ideas during material handling in Designer way.
- Enhance the skill of expressions and transfer their thoughts in practical with creative approach.

Practical:**1. Types of thinking****2. Creative Thinking**

- Explaining creativity
- Creativity and psychology
- Creativity process
- Creativity and environment

3. Design Thinking-

- What is Design?
- Role of Design and Designer in Society
- Visualization of a Design Concept, sources, inspiration
- Transformation from 2D to 3D Visualization and its characteristics
- Process of: a) Perception (b) Conception (c) Transformation

Note : conduct assignments in form of act, poetry, visuals or film**4. Elements of design** (line, form, color, texture, tone, space)**5. Principle of design** (unity, harmony, balance, dominance, rhythm, proportion)**6. Creative Design based on 2 Dimension** giving emphasis on color, texture, line, shapes.**7. Design based on 3 Dimension**

- (i) Use of any flat surface (eg.- paper, fabric etc.)
- (ii) Use of any semi solid material (eg. - clay etc.)
- (iii) Use of any solid material (eg. Metal, wood etc.)

Recommended Books :

1. Adair, John Eric (2008) *The Concise adair on creativity and innovation*, Viva Books. New Delhi
2. Gamez, George (1997) *Creativity: how to catch lightning in a bottle*, Jaico Pub. Mumbai
3. गोस्वामी, प्रेमचन्द (2000) रूपद्र कला के मूल आधार, अनन्त पब्लिकेशन्स, जयपुर
4. गुर्जर, शर्मिला (2003) वस्त्र रंगाई तकनीक, राजस्थान हिन्दी ग्रंथ अकादमी, जयपुर

TXTD 405 Design Research and Methodology

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:-

- To understand of research its type and process
- To understand different type of data and its use for to develop a new design.
- To use the data for new product with skill.

Theory :

Section A

1. Need Based Study
 - A) Meaning, Objective, Motivations, Significance, Characteristics of Research, Research Methodology Versus Research Method, Research Method & Scientific Research method.
 - B) Areas & Scope of Research in Textile
 - 1) Technical Textile 2) Smart Textile
 - 3) Nano Textile 4) Eco Friendly Textile
 - 5) Functional Finishes 6) Development in Printing
2. Qualitative & Quantitative Research; Type of research – Historical, Descriptive, Exploratory, Experimental.

Section B

1. Steps of doing Research
 - Selection of Problem/Topic
 - Research Design/Planning of Research Methodology
 - Data Collection
 - Representation of data
 - Data Analysis
 - Report Writing
2. Textile Research Techniques
 - Observation, Questionnaire, Experiments, Interviews, Case Studies

Section C

1. Software's for Textile Research
 - Data Analysis-SPSS
 - Design Software for Printing & Weaving
 - Simulation for Printing & Weaving effect
 - Draping

Learning Outcome:

Upon completion of the course, the students will be able to:

- Consider the importance of Research in their respective profession.
- Learn and apply their knowledge to identify innovative areas in Textile for research.
- Identify and learn research related software's and utilizing the knowledge in their regarding job.

Recommended Books:

1. Kothari, C. R. (2004) *Research methodology: methods and techniques*. New Age International, Delhi
2. Neuman, W. Lawrence. (1997). *Social research methods: qualitative and quantitative approaches*, Allyn and Bacon, Bostan
3. Verma, R. K. and Verma, Gopal. (1988) *Methodology and techniques of research*, Anmol. New Delhi
4. Reddy, C. R. (1987) *Research methodology in social science*, Daya Pub. House. Delhi
5. Bailey, Keneth D. (1987). *Methods of social research*. Free Press, New York
6. Kathryn, Mckelvey (2003). *Fashion design process, innovation & practice*, Blackwell Pub. Oxford

TXTD 408 Design Technique Printing

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Theory:

Section A

1. Introduction to textile fiber
 - a. Physical & Chemical Properties
 - b. Classification of Fibers
 - c. Study of : cotton, wool, silk, polyester, nylon
2. Kinds of fabrics: Woven, non-woven
3. Preparation of fabric before dyeing and printing
 - a. Singing
 - b. De-sizing / Degumming
 - c. Scouring
 - d. Bleaching

Section B

1. Introduction of dyes:
 - Physical & Chemical Properties of dyes
 - Classification of Dyes
 - Study of : Natural and Direct, Reactive, acid, Vat, Disperse
2. Introduction to Dyeing Machine
 - a. Cheese/bobbin dyeing machine
 - b. Hank dyeing machine
 - c. Jigger dyeing machine
 - d. Thermo sole process
3. Introduction to printing
 - a. Styles of printing: - Direct, Discharge and Resist printings.
 - b. Methods of Printing:-Block, Screen printing, Flat Bed screen, Rotary screen printing, Transfer, Digital Printing

Section C

Introduction to Fabric finishes:

1. Basic finishes that alter hand or texture; Felting, singeing, stiffening, decatizing.
2. Surface finishes: Bleaching, delustering, calendaring, beetling, napping, flocking, burn out design, acid design, plisse design, tenting shearing and brushing.
3. Functional finishes: Waterproof and water repellent finishes, shrinkage control wrinkle resistance, durable press and flame retardant finish.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Able to know importance of finishing and dyeing techniques for various types of fabric according to requirement.
- Understand the concept of different types of quality testing of fabric and its importance for market and consumer.
- Know the importance of quality assurance for domestic and foreign market

Recommended Books:

1. Corbman, Bernard P. (1983). *Textiles: fibres to fabrics*, McGraw Hill, New York
2. Gohl, E. P. G. and Vilensky, L. D. (1983). *Textile science*, Longman Cheshire House, Melbourne
3. Shenai, V. A. (1991). *Chemistry of organic chemicals*, Sevak Publication, Bombay.
4. Gentile, Terry A. (1982). *Printed textile*, Prentice Hall, NJ
5. Clarke, W. (1973). *An Introduction to textile printing*. Newnes-Butterworth, London
6. Anstey, Helen (1974). *Tie-dyeing and batik*. Octopus Books, London
7. Smith, J. L. (2006) *Textile processing: printing, Finishing, Dying*. Abhishik Publication, Chandigarh.

TXTD 408L Design Technique Printing Lab

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	0 0 2 1

Practicals:

1. Identification of fiber (Burning, Physical & Chemical)
2. Scouring Process of Cotton fabric.
3. Bleaching Process of Cotton fabric
4. Application method of dyes : Natural and Direct, Reactive, Acid, Vat
5. Application of printing: - Direct, Discharge and Resist printings
6. Quality Checking: - Identification of dyestuff Washing Fastness, Light Fastness, Perspiration Fastness, Abrasion, Pilling fastness.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Understand and implement all required processes on fabric to enhance fabric quality.
- Apply practical knowledge of dyeing and printing styles and methods on desire fabric.

Recommended Books:

8. Corbman, Bernard P. (1983). *Textiles: fibres to fabrics*, McGraw Hill, New York
9. Gohl, E. P. G. and Vilensky, L. D. (1983). *Textile science*, Longman Cheshire House, Melbourne
10. Shenai, V. A. (1991). *Chemistry of organic chemicals*, Sevak Publication, Bombay.
11. Gentile, Terry A. (1982). *Printed textile*, Prentice Hall, NJ
12. Clarke, W. (1973). *An Introduction to textile printing*. Newnes-Butterworth, London
13. Anstey, Helen (1974). *Tie-dyeing and batik*. Octopus Books, London
14. Smith, J. L. (2006) *Textile processing: printing, Finishing, Dying*. Abhishik Publication, Chandigarh.

TXTD 409 Design Technique Weaving

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Theory:

Section A

1. Weave Representation: Weaving plan Methods of Weave Representation, Repeat of Weave, Draft, Requirement to Draw in Weaving plan, Lifting plan, Relation between weave draft and lifting plan, Construction of weaving plan from a given weave, Construction of weave from a given draft and lifting plan, Construction of draft from a given lifting plan and weave, Basic Weave: Plain, twill, satin and sateen, Different types of selvedges.
2. Advance weaves:
 Double cloth (Plain, Twill, Diamond) Broken twill, Extra Warp and weft, Bed ford-cord weave, Herring bone twill, Types of crepe weave.
3. (a) Basic Knowledge of Cost estimation of Fabric per yard/meter
 (b) Yarn count calculation indirect or fixed system
 (c) Direct or Fixed length system
 (d) Universal System
 (e) Reed count, Heald count

Section B

1. (A) Types of Loom :
 - (i) Vertical Loom
 - (ii) Horizontal Loom
- (B) Introduction of Loom
 - (i) Motions of the loom – primary motion
 - (a) Shedding
 - (b) Picking
 - (c) Beating
 - (ii) Secondary Motion
 - (a) Take up motion (b) let off motion (3, 5, 7 wheels)

2. Dobby :
 - Definition of Dobby
 - Scope of Dobby
 - Types of Dobby
3. Details study of following Dobbies :
 - Barrel Dobby
 - Lattice Handloom Liver Dobby
 - Centre close shed Dobby
 - Bottom close shed Dobby
 - Side and cross border Dobby
 - Hardekare Dobby

Section C

1. Introduction to Card punching machine:
 - Piano card punching machine
 - Hand Block card punching machine
 - Electronic Card Punching Machine
2. Introduction to Jacquard :
 - Definition of Jacquard
 - Scope of Jacquard
 - Use of Jacquard
3. Introduction of following Types Jacquards
 - (a) Single lift single cylinder jacquard
 - (b) Double lift single cylinder Jacquard
 - (c) Double lift double cylinder jacquard
 - (d) Introduction to shuttle less loom
 - (e) Electronic Jacquard

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Produce fabric by weaving knowledge.
- Learn all weaving details and able to implement on fabric

Recommended Books:

1. Corbman, Bernard P. (1983). *Textiles: fibres to fabrics*, McGraw Hill, New York.
2. Yates, Marypaul (1996) *Textile: a handbook for designers*, W. W. Norton & Company, London.
3. Blinow, I and Beley, Shibabaw (1988) *Design of woven fabrics*, Mir Publication, Mascow.
4. Fannin, Allen (1979) *Handloom weaving technology*, Van Nostrand reinhold, New York.
5. Gohl, E. P. G. and Vilensky, L. D. (1983). *Textile science*, Longman Cheshire House, Melbourne.

TXTD 409L Design Technique Weaving Lab**Max. Marks : 100****(CA: 40 + ESA: 60)****L T P C****0 0 2 1****Practicals:**

Take 5 Woven samples for analysis

Find there Material, Weave, Ends, Picks, cover factor, warp & weft Pattern, GSM, Yarn Count, Twist and other necessary parameters.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Learn and reproduce any type of fabric according to requirement.

Recommended Books:

6. Corbman, Bernard P. (1983). *Textiles: fibres to fabrics*, McGraw Hill, New York.
7. Yates, Marypaul (1996) *Textile: a handbook for designers*, W. W. Norton & Company, London.
8. Blinow, I and Beley, Shibabaw (1988) *Design of woven fabrics*, Mir Publication, Mascow.
9. Fannin, Allen (1979) *Handloom weaving technology*, Van Nostrand reinhold, New York.
10. Gohl, E. P. G. and Vilensky, L. D. (1983). *Textile science*, Longman Cheshire House, Melbourne.

TXTD 412L Visual Research and Development Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	8	4

Practicals:

- Effect of colour, colour mixing, texture & their influence on colour perception.(eg. - paper work)
 Visual research of natural objects and manmade objects.
- Visual Research through printing-
 - Develop 5 different paper designs for each of following dyed & printed styles & show the relation of colour & perception through dyeing & printing.
 - I. Tie & dye with direct dyes for 5 samples (size = 10"×10")
 - II. Direct style of printing with pigment dyes by stencil/ screen method on cotton, silk and wool
- **Visual Research through weaving-**
 - Application of colour, colour mixing, textures & its effects through weaving.
 - Mixture of different dyed fibres/yarns & dyed yarn by twisting.
 - Combination of different coloured threads, colour strips & checks.
 - Simple regular & irregular, counts-change, graduated pattern.
 - Compound orders of colouring.
 - Balance of contrast in pattern range designing.
 - Colour combinations in relation to weave.

Learning Outcomes:-

Upon completion of the course, the students will be able to:

- Know how to see color, texture and attributes and enhance drawing skill. Develop a fabric with knowledge of the effect of color on yarn and weave/print and vice-versa.
- Manipulate and produce fabric by visual research

Recommended Books:

1. Grosicki, Z. (2004) *Watson's textile design and colour*. Woodhead Publication, Cambridge

2. Whelan, Bride M. and Tina Sutton (2004). *The complete color harmony*, Impact, Delhi
3. Gale, Colin and Kaur, Jasbir (2011) *Fashion and textiles*, C. B. S. Publication, New Delhi
4. Paterson, D (1998) *Textile colour mixing*, Abhishek pub. Chandigarh

CS 420 Fundamentals of Computer

Max. Marks : 100

(CA: 40 + ESA: 60)

L T P C

2 0 0 2

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Learn Theoretical basics of computer & its component, outgoing incoming functions and implement in their domain work.
- Understand the operations of computer for data tabulation, analysis and presentation in their projects research etc.
- Know editing Concept. It helps them in processing of Images to assist documentation and presentation.

Theory:

Section A

1. Basic components and their functions
2. Primary and secondary storage
3. The use of computers at the most basic levels of working
4. The need and essence of automation in Industry.

Section B

1. Understanding of operating system
2. Network basic and Internet
3. Internet as a powerful tool for data collection.
4. Overview of Word Processors (MS-Word), Spreadsheet (MS-Excel), Presentation (MS-Power Point)

Section C

1. RGB color Model; Monitor Resolution; Graphics/Image File Formats; Pixels, Bit-Map, Monochrome Bit-Map Image, Grayscale Bit-Map Image, 24 Bit Color Image, 8-Bit Color Image;

2. Standard System Independent Formats: GIF, JPEG, TIFF
3. System dependent formats: BMP, PAINT, SCANNING
4. Introduction to CorelDraw/Adobe Illustrator

Recommended Books :

- Rajaraman, V. (2010) *Fundamentals of computers*. PHI Learning, New Delhi
- Mukherjee, Dipti Prasad (1999) *Fundamentals of computer graphics multimedia*. PHI, New Delhi

CS 420L Fundamentals of Computer Lab

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
0	0	2	1

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Learn & apply basics of computer in their domain work.
- make their presentations with application of data tabulation, analysis etc in their projects research etc.
- use MS-Word & MS-PowerPoint Functions which helps them in documentation and presentation of their domain work.
- Know Photo editing & capturing which helps them in processing of Images to assist documentation and presentation.
 1. Documentation using MS-Word
 2. Data Tabulation using MS-Excel
 3. Data Analysis and presentation using MS-PowerPoint
 4. Photo editing & capturing

Recommended Books :

- Rajaraman, V. (2010) *Fundamentals of computers*. PHI Learning, New Delhi
- Mukherjee, Dipti Prasad (1999) *Fundamentals of computer graphics multimedia*. PHI, New Delhi

Second Semester

TSKL 402 Communication Skills and Presentation Techniques

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Theory:

Section A

- a. The need for effective communication
- b. Communication structure and models
- c. Oral skills: Listening and apprehending, effective speaking,
- d. Group Discussions and Interviews

Section B

- a. Written Communication: Business enquiry, Sales Promotion letter, Recruitment, Job Application, Complaint letters, Notices, Circulars, Report Writing
- b. Business Presentation Skills

Section C

- a. An introduction to Audio, Visual and Audio Visual Communication tools.

Practical:

1. Preparing a power-point presentation on a theme of their choice (10-15 minutes).
2. Preparing a business report
3. Preparing a print advertisement (Posters, Newspaper or Magazine Advertisement)

Note: Students will attempt five questions in all. They can select not more than two questions from each unit.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Develop their communicative competence and their critical thinking abilities.

- Appraise the importance of effective communication in their respective professions.
- Improve interpersonal skills which will enhance their presentation skills.
- Learn and apply the knowledge of report writing in formal situations.
- Communicate effectively and to make an effective social interaction utilizing the knowledge imparted in the class.
- Prepare their CV/Resume so as to highlight their accomplishments while applying for jobs.
- Develop effective writing process to compose different types of letters, Circulars, Agenda, Minutes, Notices

Recommended Books:

1. Bovee, C., L., John V. Thill and Barbara E. Schatzman. (2004). *Business Communication Today: Seventh Edition*. Delhi: Pearson Education.
2. Diwan, P. (2004). *Effective Business Communication*. New Delhi: Excel Books, 2004.
3. Kaul, A. (2014). *Effective Business Communication*, New Delhi: PHI Learning Pvt. Ltd, 2014.
4. Lesikar, R. V. and John D. Pettit. (1998). *Report Writing for Business*. Boston: McGraw-Hill, 1998.
5. Lesikar, R. V and Marie E. Flatley. (2002). *Basic Business Communication: Skills for empowering the Internet Generation: Ninth Edition*. New Delhi: Tata McGraw-Hill Publishing Company Ltd.
6. Pease, A. and Barbara Pease. (2005). *The Definitive Book of Body Language*. New Delhi: Manjul Publishing House.
7. Rupesh, J. and Weldon Kees. (1996). *Nonverbal Communication: Notes on Visual Perception of Human Relations*. Berkeley: University of California Press.
8. Sharma R.C. and Krishan Mohan. (2007) *Business Correspondence and Report Writing*. New Delhi: Tata Mc Graw Hill

TSKL 402L Computer Aided Textile Designing (Weaving) - I Lab

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	0 0 4 2

Methodology:

1. Creation of weave
2. Basic pathway for Making New Design
 - a. Editing a Peg-Plan.
 - b. Editing the draft.
 - c. Editing the warp and weft patterns.
 - d. Making the yarns and the yarn Libraries.
3. Weaving and Printing Design.
4. Print the Master Cards.
5. Edit 10 designs of each category
6. Take 5 printouts of each.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Understand the use of CATD software for constructive design.
- Understand the scope of software for professional work in industries.
- Understand how to design yarn with their technical particulars.

TXTD 401L Computer Aided Textile Designing (Printing) -I Lab

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	0 0 4 2

Methodology:

1. Creation of design with the help of Adobe Photoshop
2. Source of design for scanning
 - a. Artist Sketch
 - b. Printed cloth
3. Scanning Process

4. Functions of tools
5. Resizing & re-sampling
6. Repeat setting
7. Retouching/Editing
8. Colour Separation/ concept of layer & channels
9. Over Lapping
10. Creation of Design
11. Edit 10 designs of each category.
12. Take 5 printouts of each.

Learning outcomes:

Upon completion of the course, the students will be able to:

- Understand the use of adobe Photoshop software for surface design.
- Understand the scope of software for professional work in industries.
- Learn and implement for printed design with various functions and limitation .

TXTD 403 Conceptual Design

Max. Marks : 100

(CA: 40 + ESA: 60)

L T P C

2 0 0 2

Theory:

Section A

Design concept, purpose, objective; Relation between client's need & demand and Design; Consumer Segmentation; Design concept for different consumer groups/customer segments and target markets/ market segments.

Section B

Consumer Research; Primary Data Collection Methods; Data Representation and data analysis method

Section C

Design process: Client Brief, Redefined Brief; Story Board; Initial Sketches; technical parameters, specification, costing, feasibility and viability

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Understand the relation between client's need & demand and Design;
- Difference between Client Brief, Redefined Brief;
- Develop Theoretical knowledge of doing primary and secondary research according to consumer's choice.
- Enhance the knowledge of Design process and method; for product development

Recommended Books:

- Frings, Gini Stephens (1999) *Fashion: from concept to consumer*, Prentice-Hall, N. J.
- Kotler, Philip (2003) *Marketing management*, Pearson, New Delhi
- Schiffman, Leon (2015) *Consumer Behavior*, Pearson, Delhi
- Gupta, S. P. (2002) *Statistical Methods*, Sultan Chand, New Delhi

TXTD 403L Conceptual Design Lab

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
0	0	6	3

Practicals :-

Select an actual or hypothetical brief and follow following steps:

- Redefine brief based on consumer segments;
- Select a specific product category;
- Select an Inspiration; Select a theme/mood/story;
- Secondary and Primary Data collection and Data analysis;
- Finalizing the concept;
- Exploration in terms of elements taken from inspiration;
- Create initial concepts;
- Finalize a concept and develop at least 3 concept sketches.
- Prepare specification sheets along with costing.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Develop an ability to search topic and research to final concept doing primary and secondary research according to consumer's choice.
- Experimenting, analyzing of own work.
- Transfer a 2 D design concept to 3 D product according to innovative concepts for Textile Design.

Recommended Books:

- Frings, Gini Stephens (1999) *Fashion: from concept to consumer*, Prentice-Hall, N. J.
- Kotler, Philip (2003) *Marketing management*, Pearson, New Delhi
- Schiffman, Leon (2015) *Consumer Behavior*, Pearson, Delhi
- Gupta, S. P. (2002) *Statistical Methods*, Sultan Chand, New Delhi

TXTD 407L Design Studio (Weaving) - I Lab

Max. Marks : 100

L T P C

(CA: 40 + ESA: 60)

0 0 10 5

Weaving:

Develop 5 suitable paper designs for each of following & develop one Woven Sample of each:

- a. Plain Double cloth weave.
- b. Broken Twill weave.
- c. Extra warp and Weft.
- d. Bed-ford-cord weave.
- e. Herring bone weave.

Note:

- 1) Theme should be given by concerned Teacher.
- 2) Preparation of sketch book with selected 50 sketches.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Develop different fabrics through advance construction.
- Implement different type of yarns, dyes and the technique in weaving.

TXTD 406L Design Studio (Printing) - I Lab

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	0 0 10 5

Practical:-

- Develop 5 suitable paper designs for each of following & develop one Printed Sample of each:
 - a. Direct style of printing with Pigment dyes by block for Table cloth/Bed sheet
 - b. Resist style of printing with natural dyes by block for mats
 - c. Resist style of printing with reactive dyes by block/screen for Dress material
 - d. Discharge style of printing with acid dyes by screen for scarf
 - e. Take any one above style & method with value addition for curtain

Note:

- Theme should be given by concerned Teacher
- Preparation of sketch book with selected 50 sketches

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Develop different fabrics through different printing styles and methods.
- Implement different type dyes on different type of fabrics.

TXTD 410 Fundamentals of Marketing

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	4 0 0 4

Theory:

Section A

- a) Meaning, Nature and scope of Marketing, role and importance of Marketing in the modern economy, the new concept of marketing.
- b) The evolution of the Indian textile Industry, the present status and emerging trends in the Indian textile sector.

- c) Organization of the textile industry: Public and Private sectors centralized and de-centralized sectors, hand-loom, co-operatives, import and export trends, multinational companies.

Section B

- a) Marketing: Basic Concept & 4Ps
 b) Product: Product life cycle-ANSOFF Matrix for diversification
 c) Pricing: Concept, Pricing objectives and strategies, pricing methods

Section C

- a) Physical Distribution – Concept, objectives and its importance, Distribution Network and Value Chain, choice of appropriate channels.
 b) Marketing Communication: Meaning, Process of communication, Steps in developing effective communication or promotion, the need for integrated marketing communication.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Understand how products & services are marketed
- Get basic knowledge about working of Textile Mills/Design houses in India and subsequent employment opportunities
- Aware about the process of pricing a product/service

Recommended Books:

- Kotler, Philip (2003) *Marketing management*, Pearson, New Delhi
- Gandhi, J. C. (1985) *Marketing: an managerial introduction*, Tata Mcgraw-Hall, New Delhi
- Ramaswamy, V. S. (2002) *Marketing management: planning, Implementation and control*, Macmillion, Delhi
- Easey, Mike (2002) *Fashion marketing*, Blackwell, Oxford.

TXTD 411 Indian Textiles

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Theory:

Section A

Study of woven textiles according to color, texture, motifs & techniques Jamdani, Baluchari, Paithani, Patola, Maheshwari, Chanderi, Banarasi

Section B

Study of dyed & printed textiles according to color, dyes, motifs & techniques Sanganeeri, Bagru, Kalamkari, Ajrakh, Akola, Bandhani, Batik, Bagh

Section C

Study of Embroidered Textiles according to color, motifs, stitches & texture Kantha, Phulkari, Kasuti, Chamba-rumal, Chikenkari, Kashmiri Kadhai, Sujuni Bihari, Mirror work

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Understand Textile and craft heritage of India.
- Get theoretical knowledge of Traditional Indian woven, printed and embroidered fabrics.

Recommended Books:

- Bhatnagar, Parul (2004) *Traditional Indian costumes & textiles*, Abhishek pub. Chandigarh
- Shukla, Das (1992) *Fabric art heritage of india*, Abhinav Pub. New Delhi
- Mehta, Rustam J. (1984) *Masterpieces of Indian textiles*, D. B. Taraporevala, Bombay
- Bhavnari, Enakshi (1982) *Decorative designs and craftsmanship of india*, D. B. Taraporevala, Bombay
- Gupta, Meenakshi and Srivastava, K. N. (2015) *Traditional Indian textile*, Lap Lambert Acadmic
- Gupta, Meenakshi, (2010) *Sanganeri Block Printing*, Navjeevan Pub. Newai

TXTD 411L Indian Textiles Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	2	1

Practical

- 1) Select any two techniques from above syllabus & explore it for furnishing and dress material range
- 2) Prepare a sketch book with selected 50 Traditional motifs

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Produce fabric and enhance the skill in at least two Indian textiles.
- Understand importance of Indian Textiles and promote them for their sustainability.

Recommended Books:

- Bhatnagar, Parul (2004) *Traditional Indian costumes & textiles*, Abhishek pub. Chandigarh
- Shukla, Das (1992) *Fabric art heritage of india*, Abhinav Pub. New Delhi
- Mehta, Rustam J. (1984) *Masterpieces of Indian textiles*, D. B. Taraporevala, Bombay
- Bhavnari, Enakshi (1982) *Decorative designs and craftsmanship of india*, D. B. Taraporevala, Bombay
- Gupta, Meenakshi and Srivastava, K. N. (2015) *Traditional Indian textile*, Lap Lambert Academic
- Gupta, Meenakshi, (2010) *Sanganeri Block Printing*, Navjeevan Pub. Newai
- Gupta, Meenakshi (2011) *Bhartiya vastra kala*, Rajasthan Hindi Granth Acadmi, Jaipur
- Gupta, Meenakshi, (2010) *Sanganeri Block Printing*, Navjeevan Pub. Newai

Third Semester

TXTD 502L Computer Aided Textile Designing (Weaving) - II

Max. Marks : 100

L T P C

(CA: 40 + ESA: 60)

0 0 8 4

Weaving:

1. Develop 5 designs (total 10) for each of following with illustrations on paper
 - (a) Dress Material
 - (b) Furnishing
2. Develop & edit all above designs on software (Arahne)
Develop & edit any 3 designs of each on software (Arahne) for print, weave and drape (total 18)

1. Take total 18 printouts.

Note: Prepare a sketch book with minimum 50 sketches.

Methodology:

- Creation of design with the help of Arahne
- Scanning Process
- Functions of tools
- Resizing & re-sampling
- Repeat setting
- Retouching/Editing
- Color Separation
- Draping

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Examine, and modify ideas very quickly on the color monitor before producing any real fabrics.
- Understand the CATD as useful tool.
- Make modern designs and unique colour combinations which can easily satisfy the consumer's need.
- Illustrate the product with details of weave, color and pattern.

- Take decision of elimination of some irrelevant parameters and make it little affordable and time consuming process of prototyping and colour matching in printed/woven fabric design.

TXTD 503L Design Studio (Weaving) - II Lab

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	0	0	12	6

Weaving :

- 1) Develop any two ranges of following (no. of articles should be 4 in each range)
 - a) Furnishing for office purpose (sheer curtain, upholstery, carpet, cushion cover, mats etc.)
 - b) Home Furnishing (Curtain, Bed-sheet, pillow cover, floor covering, quilt etc.)
 - c) Dress material for Adults
 - d) Dress material for kids
- 2) Preparation of sketch book with selected 100 sketches.

Note: Each and every weaving student should develop and weave at list one sample given above subject on Jacquard or dobby.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- develop fabrics through knowledge of advance constructions ,
- Implement different type of yarns, dyes and the weaving technique.

TXTD 505 Fundamentals of Fashion Merchandising

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Section A

- a. Fashion and its relevance in everyday life.
- b. Fashion-Definition, Concept
- c. Fashion as a reflection of life style
- d. Creation of fashion-from fiber to finished product

Section B

- e. Basic role of Merchandiser
- f. Functions of Export promotion council/ commodity board with reference to Apparel Export.
- g. Selection and Appointment of agent.
- h. Role performed by Buying Agent.
- i. Import Export Policy
- j. Market Entry Strategy
- k. Objectives of international Marketing
- l. Benefits of International Marketing
- m. Drawbacks of international Marketing.

Section C

- a. Quality theory: quality, meaning and scope, quality in textile, quality and customer satisfaction, ISO systems for textile quality.
- b. Total Quality Management (TQM)
- c. Total Productive Maintenance (TPM)
- d. Six Sigma approach of Quality Improvement.
- e. Quality Circles
- f. Kaizen
- g. 5 “S”

Learning outcomes:

Upon completion of the course, the students will be able to:

- Understand the fashion and trends and its importance for fashion industry.
- Work as merchandiser in textile and fashion industry.
- Understand the importance of quality assurance for all type of textiles for domestic and export market.

Recommended Books:

- Fringgs, Stephen Gini (1999) *From concept to consumers*, Prentice-Hall, N.J.
- Jernigan, Marian H. (2008) *Fashion merchandising and marketing*, Pearson Education, Delhi

- Rosenau, Jeremy A. (2014) *Apparel merchandising*, Bloomsbury Publication, New York
- Goworek, Helen (2001) *Apparel Merchandising*, Blackwell Science, Oxford
- Shukla, Rajesh Kumar (2005) *Total quality management*, New Royal Book, Lucknow

TXTD 510L Textile Testing and Assurance Lab

Max. Marks : 100

(CA: 40 + ESA: 60)

L T P C

0 0 4 2

Practical :

1. Preparation the sample before cloth analysis.
2. Collect 5 different woven/printed samples for analysis.
3. Understanding the conditioning of the textile material.
4. Checking require the entire test according to the end use of the material.
5. Unmderstanding the textile standard.
6. Select any one sample for reproduction.
7. Fabric defect indentification.
8. Fabric Care.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Handle of different type of testing equipments with different textiles testing.
- Handle the testing equipments as a professional in industry.
- Make testing report according to testing results.

TXTD 509 Trends and Forecasting

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
2	0	0	2

Theory:

Section A

Trends and the role of trend forecasting; Forecasting Personnel.

Section B

Forecasting services / agencies, publications.

Section C

Forecasting process: From Producers to Consumers, primary and Secondary Market Forecasts

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Understand about importance of trends forecasting for coming season.
- understand the types of forecasting and its process, Identification of types of market, agencies and services understand the types of forecasting and its process, Identification of types of market, agencies and services

Recommended Books:

- Fringgs, Stephen Gini (1999) *From concept to consumers*, Prentice-Hall, N.J.
- Burns, Leslie Davis (2007) *The business of fashion: Designing, manufacturing and marketing*, Fairchild Publication, New York
- Mckelvey, Kathryn (2008) *Fashion forecasting*, Wiley-Blackwell,
- Rousso, Chelsea (2012) *Fashion forward: a guide to fashion forecasting*, Fairchild Books, New York Scully, Kate, *Fashion color forecasting*

TXTD 509L Trends and Forecasting Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	2	1

Practical :

To prepare a small design project by using design method process

Weaving and Printing :

1. Preparation the sample before cloth analysis.
2. Collect 5 different woven/printed samples for analysis.
3. Understanding the conditioning of the textile material.
4. Checking require the entire text according to the end use of the material.
5. Understanding the textile standard.
6. Select any one sample for reproduction.
7. Fabric defect identification.
8. Fabric Care.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Develop products according to trends forecasting for coming season.
- Work as a professional designer in textile and fashion industry

Recommended Books:

- Fringgs, Stephen Gini (1999) *From concept to consumers*, Prentice-Hall, N.J.
- Burns, Leslie Davis (2007) *The business of fashion: Designing, manufacturing and marketing*, Fairchild Publication, New York
- Mckelvey, Kathryn (2008) *Fashion forecasting*, Wiley-Blackwell,
- Rousso, Chelsea (2012) *Fashion forward: a guide to fashion forecasting*, Fairchild Books, New York
- Scully, Kate, *Fashion color forecasting*

Discipline Elective (Weaving)

Summary of learning outcomes

This paper would help to develop advanced skills and exploration in processes and materials. It encourages the synthesis of ideas from both

direct and conceptual sources to produce outcomes to satisfy a set design brief. The core idea behind a design project is to develop professional skills of the students and encourage independent thinking.

The student should also understand the importance of research and evaluating the role of the client and market in the design process and product usage and utility for textile design.

The project may be based on a realistic brief from the industry or it may be a hypothetical brief in either case a guide will be there to supervise the project. A design project should be given as an individual project to students.

The students will be the core custodians of the project and the onus will be on them from beginning till the end which will develop a sense of ownership and commitment. The students will also learn to keep the deadlines sacrosanct. The project will lead to the development of the designer's skills and knowledge through a process of 'hands on-minds on'. A range (Minimum 4 articles) has to be developed.

The project will be culminated with a "Project Report". The project report shall be as per the below mentioned format:

1. Cover Page
2. List of contents
3. Introduction
4. Methodology
5. Data collection
6. Data analysis
7. Representation of the analyzed data.
8. Design outcome
9. Conclusion
10. List of tables and graphs
11. References.

Learning outcomes:

Upon completion of the course, the students will be able to:

- Develop concept on basis of given brief.
- Make research process according to client profile and need.
- Study the market demand, present trend and develop new product accordingly.
- Understand the costumer need and explore the ideas accordingly.

. TXTD 501L Computer Aided Textile Designing (Printing) - II Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	8	4

Printing:

1. Develop 6 designs (total 12) for each of following with illustrations on paper
 - (a) Dress Material
 - (b) Furnishing
2. Develop & edit all above designs on software (Arahne)

Develop & edit any 5 designs of each on software (Arahne) for print and drape (total 20)

 1. Take total 20 printouts.

Note: Prepare a sketch book with minimum 50 sketches.

Methodology:

- Creation of design with the help of Arahne
- Scanning Process
- Functions of tools
- Resizing & re-sampling
- Repeat setting
- Retouching/Editing
- Color Separation
- Drapin

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Do surface design. with CATD software for various aspects.
- Develop new concept and design for professional work in industries.
- Make draping for Apparel & home textile material before sampling process.

TXTD 504L Design Studio (Printing) - II Lab

Max. Marks : 100

L	T	P	C
0	0	12	6

Practical :

Printing

- Develop any two ranges of following (no. of articles should be 4 in each range)
 - (a) Furnishing for office purpose (sheer curtain, upholstery, carpet, cushion cover, mats etc.)
 - (b) Home Furnishing (Curtain, Bed-sheet, pillow cover, floor covering, quilt etc.)
 - (c) Dress material for Adults.
 - (d) Dress material for kids.

Preparation of sketch book with selected 100 sketches.

Note: Each and every weaving student should develop and weave at list one sample given above subject on Transfer Printing.

Learning outcomes:

Upon completion of the course, the students will be able to:

- understand the different types of prints / surface embellishments.
- learn pre- printing and after printing process.

Discipline Elective (Printing/Weaving)

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
0	0	4	2

Practical's:-

Summary of learning outcomes

This paper would help to develop advanced skills and exploration in processes and materials. It encourages the synthesis of ideas from both direct and conceptual sources to produce outcomes to satisfy a set design brief. The core idea behind a design project is to develop professional skills of the students and encourage independent thinking.

The student should also understand the importance of research and evaluating the role of the client and market in the design process and product usage and utility for textile design.

The project may be based on a realistic brief from the industry or it may be a hypothetical brief in either case a guide will be there to supervise the project. A design project should be given as an individual project to students.

The students will be the core custodians of the project and the onus will be on them from beginning till the end which will develop a sense of ownership and commitment. The students will also learn to keep the deadlines sacrosanct. The project will lead to the development of the designer's skills and knowledge through a process of 'hands on-minds on'. A range (Minimum 4 articles) has to be developed.

The project will be culminated with a "Project Report". The project report shall be as per the below mentioned format:

1. Cover Page
2. List of contents
3. Introduction
4. Methodology
5. Data collection
6. Data analysis
7. Representation of the analyzed data.
8. Design outcome
9. Conclusion
10. List of tables and graphs
11. References.

Learning outcome:

Upon completion of the course, the students will be able to:

- Develop concept on basis of given brief.
- Make research process according to client profile and need.
- Study the market demand, present trend and develop new product accordingly.
- Understand the costumer need and explore the ideas accordingly.

Fourth Semester

TXTD 517P / TXTD 512D UIL Project / Dissertation

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	48	24

Guideline for UIL Project :-

Exposing students in real life working environment as a part of an academic curriculum helps the students to develop and enhance academic, personal and professional competencies. Through this orientation students will understand the importance of industrial project which includes:

1. Application of knowledge learned
2. Acquire and develop practical skills
3. Strengthen work values
4. Gain interpersonal skills
5. Get an understanding of how the market functions

The Project will be evaluated by an external examiner, an internal examiner and a Vice-chancellor's nominee. The marks of the continuous assessment obtained from the industry will be compiled by the Head of the Department based on various interim reports of mid-term/end of term evaluation received from the host organization and timely submission of report, synopsis and dissertation.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Understand industry and its day to day working process.
- Learn working process through selected organization.
- Understand role of designer in industry and enhance the skill and previous knowledge to develop new products.

Guideline for Dissertation

The student will be required to prepare & submit a project report requiring of self study. There will be an evaluation by an external expert & and internal member at the end of the semester

Learning Outcomes:

Upon completion of this course students should be able to

- Implement research methodology in there project.
- make presentation and documentation.

Reading Electives

DES 432R Introduction to Behavioral Science

Max. Marks : 100

L	T	P	C
0	0	0	2

Theory:

Introduction to Behavioral sciences; a. Methods used in behavioral sciences, II. Behavior of the Individual: a. Nature/nurture debate, b. Behaviorism and learning theories, c. Behavior Modification

Science of Relationships: a. Non-verbal communication, b. Interpersonal relationships, c. Friendship and Love

Behavior at Work: a. Adjustment to Work, b. Motivation at work, c. Group dynamics, d. Decision-making

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Grasp basic knowledge about behavioral science
- Appreciate the value of behavioral sciences in modern life
- Acquire “how to” discussions that address everyday problems.
- Develop critical thinking with logical reasoning and approach fundamental issues of health by multi-perspectives
- Show empathy to others and concern the health and well-being of others.

Recommended Books:

1. Weiten, W., & Lloyd, M. A. , Psychology Applied to Modern Life: Adjustment to the Turn of the Century. 8th ed., Wadsworth, 2006.
2. Aboud, F. E., Health Psychology in Global Perspective, Thousand Oaks: Sage, 1998.
3. Bond, M. H. (ed.), The Handbook of Chinese Psychology, Hong Kong; Oxford; New York: Oxford University Press, 1996.
4. Cockerham, W. C., Medical Sociology, 8th ed., Upper Saddle River, N.J.: Prentice-Hall, 2001.
5. Cowling, A. G., Stanworth, M. J. K., Bennett, R. D., Curran, I., & Lyons, P., Behavioral

6. Sciences for Managers, 2nd ed., London: Arnold, 1988.
7. Fadem, B., Behavioral Science, 2nd ed., Baltimore: Harwal Publishing, 1994.
8. Greenberg, J., & Baron, R. A., Behavior in Organization, 4th ed., Boston: Allyn & Bacon, 1993.
9. Ishaq, W. (ed.), Human Behavior in Today's World, New York: Praeger, 1991.
10. Krug, R. S., & Cass, A. R., Behavioral Sciences, 3rd ed., New York, Hong Kong: Springer-Verlag, 1992.
11. Myers, D. G., Exploring Psychology, 6th Ed., New York: Worth Publishers, 2004.
12. Nevid, J. S., Rathus, S. A., Rubenstein, H. R., Health in the New Millennium, New York: Worth Publishers, 1998
13. Sarafino, E. P., Health Psychology: Bio psycho social Interactions, 3rd ed., New York: John Wiley & Sons, Inc., 1998
14. Taylor, S. E., Peplau, L. A., & Sears, D. O., Social Psychology, 10th ed., New Jersey, Upper Saddle River: Prentice Hall, 2000.
15. Organizational Behavior: Human Behavior at Work Book by John W. Newstrom and Keith Davis

Online Course:

Students can find avail the online courses on this subject from reputed and authentic sources and can produce the authentic evidences of the same.

Following are some online advertising courses:

- 1) Behavioral Psychology Courses
Link: <https://www.edx.org/learn/behavioral-psychology>
- 2) Online Courses and Classes in Behavioral Psychology
Link:
https://study.com/articles/Online_Courses_and_Classes_in_Behavioral_Psychology.html
- 3) Behavioural Science MOOCs and Free Online Courses
Link: <https://www.mooc-list.com/tags/behavioural-science>
- 4) Psychology
Link: <https://www.coursera.org/browse/social-sciences/psychology>

DES 433R Introduction to Intellectual property Rights (IPR)

Max. Marks : 100

L	T	P	C
0	0	0	2

Theory:

Introduction to Intellectual Property and Rights, Objectives of National Intellectual Property Rights (IPR) Policy 2016, Government Initiatives for IPR: National Intellectual Property Rights Policy 2016 (NIPR Policy), Cell for IPR Promotion and Management (CIPAM), Awareness Initiatives, Strengthening Enforcement Agencies, Sensitization of Judiciary, Modernization of IP Offices, Augmentation of Human Resources, Re-engineering of IP Processes - Patent & Trade Mark Rules Amended, IPRs for Startups, Concession for MSMEs

Importance of IPR, Benefits of IP Registration, Effects of Non-Registration, Infringement and Penalties

Types of Intellectual Property Rights: Patents & Patents Registration Process, Designs & Design Registration Process, Trademarks & Trademarks Registration Process, Copyrights & Copyright Registration Process, Geographical Indications (Gi) & Gi Registration Process, Plant Varieties, Semiconductor Integrated Circuits Layout Design

Learning Outcomes:

Upon completion of the course, the students will be able to

- Define intellectual property.
- Identify and State reasons and ways to protect intellectual property
- Define the types such as: patents, copyrights, trademarks, designs, etc., found in everyday experiences
- Define piracy and counterfeit
- Understand the harm caused by piracy and counterfeit
- Identify the timelines and Duration of patents, copyrights, trademarks and designs
- Use the knowledge for getting IPR as per the requirement.

Recommended Books:

- Secrets of Intellectual Property: A Guide for Small and Medium-sized Exporters. (n.d.). Retrieved from <https://www.wipo.int/publications/en/details.jsp?id=294&plang=EN>
- Secrets of Intellectual Property: A Guide for Small and Medium-sized Exporters. (n.d.). Retrieved from <https://www.wipo.int/publications/en/details.jsp?id=294&plang=EN>
- School-Teachers-Training-Module: Understanding Intellectual Property Rights
- **DIPP:** Nodal point for all IPR policy issues
Department for Promotion of Industry and Internal Trade | MoCI | GoI. (2017, January 08). Retrieved from <https://dipp.gov.in/>
- **CGPTDM office:** For filing of IP applications/ to obtain real time status of all IP applications/ checking grants/ registration of IPRs: Patent: Patent Filing Requirements in India. (2011, January 14). Retrieved from <https://www.bananaip.com/ip-news-center/patent-filing-requirements-in-india/>
- **Copyright office:** For information related to filling and status of copyright applications:
Copyright Office. (n.d.). Retrieved from <http://copyright.gov.in/>
- **Startup India:** For information regarding startups:
Startup India. (n.d.). Retrieved from <https://www.startupindia.gov.in/>
- **Protection of Plant Varieties and Farmers' Rights Authority:** For filing/ registration of plant variety applications
NEWS / Forth Coming Activities. (n.d.). Retrieved from <http://www.plantauthority.gov.in/>
- **TIFAC:** For information on filing of Indian/ foreign patents, patent search facilities: www.tifac.org.in
TIFAC - Foresight. (n.d.). Retrieved from <http://www.tifac.org.in/>
- **Ministry of Electronics and Information Technology:** Providing IP Facilitation Support to DeitY Societies and Grantee Institutions, Financial Support to Startups and SMEs for International Patent Filing through SIP-EIT Scheme, Creation of IPR Awareness through Financial Support to Industry Bodies and Academia, Providing IPR Related Services including Prior Art Search

Ministry of Electronics and Information Technology ... (n.d.).
Retrieved from <http://meity.gov.in/>

- **Semiconductor Integrated Circuits Layout Design Registry (SICLDR):** For information related to filling and status of Semiconductor Integrated Circuit Layout Designs applications
SICLDR:Semiconductor Integrated Circuits Layout Design ... (n.d.).
Retrieved from <http://sicldr.gov.in/>
- **Teachers' Training Module:**
<http://cipam.gov.in/publications/resource-material/>
Official website of Department for Promotion of Industry and Internal Trade Ministry of Commerce and Industry Government of India. (n.d.). Retrieved from <http://cipam.gov.in/>
- **Booklet:** <http://cipam.gov.in/wp-content/uploads/2017/09/bookletIPR.pdf>
Official website of Department for Promotion of Industry and Internal Trade Ministry of Commerce and Industry Government of India. (n.d.). Retrieved from <http://cipam.gov.in/>

DES 523R Fundamentals of Retail Management

Max. Marks : 100

L	T	P	C
0	0	0	2

Theory:

Section A

- I Introduction : Meaning and Definition, Social and economic Significance of retailing, Opportunities in retailing, characteristics of retailing
- Historical perspective of Retail in India and current Scenario.

Section B

- Types of retailers, retail change drivers in India, evolution of retail formats Theories of Retail Development - Environmental Theory, Cyclical Theory, Conflict Theory Service Retailing
- Retail Strategy: Meaning and Definition, building sustainable competitive advantage, growth strategies, global growth strategies, retail planning process.
- Retail Value Chain.

Section C

- Financial Aspects of Retail- Retail Economics, measures of performance income statement and balance sheet, measure of performance evaluation-
- Ratio analysis. Measuring retail store and space performance, measuring employee productivity.
- Ethics in Retailing: Stakeholders expectations- customers, community and General public, employees, business partners, shareholders.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Describe retailing, the entities involved, and the impact of decisions on a retail business
- Analyze the evolution of the retail industry
- Recognize career opportunities available in the retail businesses

Recommended Books:

1. Gibson G. Vedmani: Retail Management – Functional Principles & Practices; Jaico publishing house.
2. Chetan Bajaj, Rajnish Tuli, Nidhi V. Srivastava; Retail Management, Oxford University Press.
3. Swapna Pradhan : Retail Management, Tata McGraw Hill
4. Barry Berman, Joel R Evans: Retail Management – A strategic approach; Pearson

DES 434R Management of Information System

Max. Marks : 100

L	T	P	C
0	0	0	2

Section A

- Framework: Concept, Management, Information, System, MIS definitions, Nature & Scope, Characteristics, Functions, Importance & Failures, and MIS & Use of Computers.
- Management Process: Introduction to management, Approaches to management, Functions of the manager, MIS: A support to the management, Management effectiveness, Planning, Organizing, Staffing, Directing, Controlling, and MIS: A tool for management process.

Section B

- Information : Concept, Attributes , Classification (action vs. no-action, recurring vs. non-recurring information, internal vs. external, organizational, functional, knowledge, decision-support, operational), methods of information collection, Decision-making concept, Simon's model of decision-making, MIS & decision-making.
- Information System for Decision-making: Classification of MIS (TPS, MIS, DSS, EIS, OASs, BESSs).

Section C

- Computer hardware for information system: Introduction- Basics of data representation, types of computers, basic components of computer system, factors to buy a PC Computer software for information system: Introduction- programming languages, classification of software, role of software in problem solving, criteria for investment in hardware & software.
- Applications of MIS in manufacturing sector: introduction, personnel, finance, Production, materials, marketing management.

Learning Outcomes:

Upon completion of the course, the students will be able to:

- Describe the role of information technology and information systems in business

- Understand the current issues of information technology and relate those issues to the firm
- Reproduce a working knowledge of concepts and terminology related to information technology
- Analyze and apply information technology.

Recommended Books:

1. Javedekar, W.S. - Management Information Systems (Tata McGraw Hill).
 2. A.K.Gupta - Management Information Systems (S.Chand & Company Ltd., 2003).
 3. D.P.Goyal - Management Information Systems-Managerial Perspectives (Macmillan)
 4. O'Brien - Management Information System(Prentice Hall of India).
 5. Murdick R.G., Ross J.E. & Clagget J.R. – Information System for modern management. (Prentice Hall of India).
 6. Kanter - Management Information System(Prentice Hall of India).
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