Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 440033

Scheme and Syllabus

B.Sc. Textile Science

Submitted by

Board of Studies,

B.Sc. Textile Science

FYUGP-Scheme I-VIII Semester

Textile Science (Honors/Research)
Four Year (Eight Semester Degree Course)
Teaching and Examination Scheme
SEM-I

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Elements of Design	BTS1 T01	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Elements of Design	BTS1 P01	-	-	2	1	-	-	-	-	-	50	25
3	DSC	Fundamentals of Textile-I	BTS1 T02	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Fundamentals of Textile-I	BTS1 P02	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO1 T01	1	-		1	2	40	10	20	-	-	-
6	GE/OE	Refer GE/OE Basket	BGO1 P01			2	1	-	-	-	-	-	50	25
7	GE/OE	Refer GE/OE Basket	BGO1 T02	2	-	-	2	3	80	20	40	-	-	-
8	VSC	Elements of clothing construction	BVS1 P01	-	-	4	2	-	-	-	-	50	50	50
9	SEC	Refer SEC Basket	BVS1 P02	-	-	4	2	-	-	-	-	50	50	50
10	AEC	Functional English	BAE1 T01	2	-	-	2	3	80	20	40	-	-	-
11	VEC	Environmental Science	BEV1 T01	2	-	-	2	3	80	20	40	-	-	-
12	IKS	IKS (Traditional Indian Textile-I)	BIK1 T01	2	-	-	2	3	80	20	40	-	-	-
13	CC	Refer CC Basket	BCC1 P01	-	-	4	2	-				-	100	50
Total				13	-	18	**22**		**520**	**130**		**100**	**350**	

Textile Science **SEM-II**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Colour Composition	BTS2 T03	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Colour Composition	BTS2 P03	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Fundamentals of Textile-II	BTS2 T04	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Fundamentals of Textile-II	BTS2 P04	-	-	2	1	-	-	-	-	-	50	25
5	GE/OE	Refer GE/OE Basket	BGO2 T01	1	-		1	2	40	10	20			
6	GE/OE	Refer GE/OE Basket	BGO2 P01			2	1	-	-	-	-	25	25	25
7	GE/OE	Refer GE/OE Basket	BGO2 T04	2	-	-	2	3	80	20	40	-	-	-
8	VSC	Fabric Craft	BVS2 P03	-	-	4	2	-	-	-	-	50	50	50
9	SEC	Refer SEC Basket	BVS2 P04	-	-	4	2	-	-	-	-	50	50	50
10	AEC	English and communication Skills	BAE2 T02	2	-	-	2	3	80	20	40	-	-	-
11	VEC	Constitution of India	BEV2 TO2	2	-	-	2	3	80	20	40	-	-	-
12	IKS	IKS (Traditional Indian Textile-II)	BIK2 T02	2	-	-	2	3	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC2 P02	-	-	4	2	-				-	100	50
Total				13	-	18	22	-	520	**130**		**200**	**350**	

Exit option: Award of UG Certificate in Major with 40-44 credits and an additional 4 credits core NSQF course/ Internship ORContinue with Major and Minor

Textile Science **SEM III**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Basic WovenStructure – I	BTS3 T05	2	-	-	2	3	80	20	40			
2	DSC	Basic WovenStructure – I	BTS3 P05	-	-	2	1	-	-	-	-	-	50	25
3	DSC	Applied Textile Design – I	BTS3 T06	2	-	-	2	3	80	20	40			
4	DSC	Applied Textile Design – I	BTS3 P06	-	-	2	1	-	-	-	-	-	50	25
5	Minor	Minor 1 (Refer Minor Basket)		2	-	-	2	3	80	20	40			
6	Minor	Minor 1 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
7	Minor	Minor 2 (Refer Minor Basket)		2	-	-	2	3	80	20	40			
8	Minor	Minor 2 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BTGO3 T05	2	-	-	2	3	80	20	40	-	-	-
10	VSC	Refer VSC Basket	BVS3 P05	-	-	4	2	-	-	-	-	50	50	50
11	AEC	Hand Printing Technology	BAE3 T03	-	-	4	2	-	-	-	-	50	50	50
12	FP	Industrial Visit	BAE3 T03	-	-	4	2	-	-	-	-	-	100	50-
13	CC	Refer CC Basket	BCC3 P03	-	-	4	2	-	-	-	-	-	100	50
Total				10	-	24	**22**		**400**	**100**		**100**	**500**	

Textile Science **SEM IV**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Basic Woven Structure – II	BTS4 T07	2	-		2	3	80	20	40	-	-	-
2	DSC	Basic Woven Structure – II	BTS4 P07	-	-	2	1	-	-	-	-	25	25	25
3	DSC	Applied Textile Design – II	BTS4 T08	2	-		2	3	80	20	40	-	-	-
4	DSC	Applied Textile Design – II	BTS4 P08	-	-	2	1	-	-	-	-	25	25	25
5	Minor	Minor 3 (Refer Minor Basket)		2	-		2	3	80	20	40	-	-	-
6	Minor	Minor 3 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
7	Minor	Minor 4 (Refer Minor Basket)		2	-		2	3	80	20	40	-	-	-
8	Minor	Minor 4 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
9	GE/OE	Refer GE/OE Basket	BGO4 TO6	2	-	-	2	-	80	20	40	-	-	-
10	SEC	Refer SEC Basket	BVS4 P06	-	-	4	2	3	-	-	-	50	50	50
11	AEC	Creative writing	BAE4 T04	2	-	-	2	-	80	20	-	-	-	50
12	CEP	Craft Documentation	BCM4 P01	-	-	4	2	-	-	-	-	50	50	50
13	CC	Refer CC Basket	BCC4 P04	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	20	**22**		**480**	**120**		**150**	**350**	

Exit option; Award of UG Diploma in Major and Minor with 80-88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

Textile Science **SEM V**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Advance Woven Structure-I	BTS5 T09	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advance Woven Structure-I	BTS5 P09	-	-	4	2	-	-	-	-	50	50	50
3	DSC	Technical Textiles	BTS5 T010	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Intricate Traditional Textile-I	BTS5 T011	2	-	-	2	3	80	20	40	-	-	-
5	DSE	Elective 1 (Refer DSE Basket)	BTS5 T012	2	-	-	2	3	80	20	40	-	-	-
6	DSE	Elective 1 (Refer DSE Basket)	BTS5 P012			2	1	-	-	-	-	-	50	25
7	Minor	Minor 5 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
8	Minor	Minor 5 (Refer Minor Basket)				2	1	-	-	-	-	-	50	25
9	Minor	Minor 6 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 6 (Refer Minor Basket)				2	1	-	-	-	-	-	50	25
11	VSC	Refer VSC Basket	BVS5 P07	-	-	4	2	-	-	-	-	50	50	50
12	CEP	Presentation Skills	BCM5 P02	-	-	6	3	-	-	-	-	75	75	75
Total				**12**	**-**	**20**	**22**	**-**	**480**	**120**	**--**	**175**	**325**	**-**

Textile Science **SEM VI**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Advance Woven Structure - II	BTS6 T013	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Advance Woven Structure - II	BTS6 P013	-	-	6	3	-	-	-	-	100	50	75
3	DSC	Weaving Calculations	BTS6 T014	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Weaving Calculations	BTS6 P014	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Intricate TraditionalTextile-II	BTS6 T015	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Intricate TraditionalTextile-II	BTS6 P015	-	-	2	1	-	-	-	-	-	50	25
7	DSE	Elective 2 (Refer DSE Basket)	BTS6 T016	2	-	-	2	3	80	20	40	-	-	-
8	DSE	Elective 2 (Refer DSE Basket)	BTS6 P016	-	-	2	1	-	-	-	-	-	50	25
9	Minor	Minor 7 (Refer Minor Basket)		2	-	-	2	3	80	20	40	-	-	-
10	Minor	Minor 7 (Refer Minor Basket)		-	-	2	1	-	-	-	-	-	50	25
11	VSC	Refer VSC Basket	BVS6 PO8	-	-	4	2	-	-	-	-	50	50	50
12	OJT	Industrial Training	BOJ6 P01	-	-	6	3	-	-	-	-	75	75	75
Total				10	-	24	**22**		**400**	**100**		**225**	**375**	

Exit option: Award of UG Degree in Major with 120-132 credits OR Continue with Major and Minor

Textile Science **SEM VII (HONORS)**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Applied Statistics	BTS7 T017	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Applied Statistics	BTS7 P017	-	-	2	1	-	-	-	-	-	50	25
3	DSC	Trend Forecasting	BTS7 T018	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Trend Forecasting	BTS7 P018	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Theme Based Designing	BTS7 T019	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Theme Based Designing	BTS7 P019	-	-	4	2	-	-	-	-	50	50	75
7	DSC	Brand Management	BTS7 T020	2	-	-	2	3	80	20	40	-	-	-
8	DSE	Elective 3 (Refer DSE Basket)	BTS7 T021	2	-	-	2	3	80	20	40	-	-	-
9	DSE	Elective 3 (Refer DSE Basket)	BTS7 P021	-	-	4	2	-	-	-	-	50	50	75
10	RM	Research Methodology	BTS7 T022	2	-	-	2	3	80	20	40	-	-	-
11	RM	Research Methodology	BTS7 P022	-	-	4	2	-	-	-	-	-	100	50
Total				12	-	16	**20**		**480**	**120**		**100**	**300**	

Textile Science **SEM VIII (HONORS)**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Intricate weaving Techniques	BTS8 T023	2	-	-	4	3	80	20	40			
2	DSC	Intricate weaving Techniques	BTS8 P023	-	-	4		-	-	-	-	-	100	50
3	DSC	Elements of fabrics Costing	BTS8 T024	2	-	-	3	3	80	20	40			
4	DSC	Elements of fabrics Costing	BTS8 P024	-	-	2		-	-	-	-	-	50	25
5	DSC	Human Resource and Management	BTS8 T025	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Recycling of Textiles	BTS8 T026	2	-	-	3	3	80	20	40			
7	DSC	Recycling of Textiles	BTS8 P026	-	-	2		-	-	-	-	-	50	25
8	DSE	Elective 4 (Refer DSE Basket)	BTS8 T027	2	-	-	4	3	80	20	40			
9	DSE	Elective 4 (Refer DSE Basket)	BTS8 P027	-	-	4		-	-	-	-	50	50	50
10	OJT	Internship	BOJ8 P02	-	-	8	4	-	-	-	-	100	100	100
Total				10	-	20	**20**		**400**	**100**		**150**	**350**	

Four Year UG Honours Degree in Major and Minor with 160-176 credits

Textile Science **SEM VII (Research)**

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
								Theory				Practical		
				(Th)	TU	P		Exam Hrs.	SEE	CIE	Min.	SEE	CIE	Min.
1	DSC	Applied Statistics	BTS7 T017R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Applied Statistics	BTS7 P017R	-	-	4	2	-	-	-	-	50	50	50
3	DSC	Natural Dyeing	BTS7 T018R	2	-	-	2	3	80	20	40	-	-	-
4	DSC	Natural Dyeing	BTS7 P018R	-	-	2	1	-	-	-	-	-	50	25
5	DSC	Quality Assurance in Textile Industry	BTS7 T019R	2	-	-	2	3	80	20	40	-	-	-
6	DSC	Quality Assurance in Textile Industry	BTS7 P019R	-	-	2	1	-	-	-	-	-	50	25
7	DSE	Elective 3 (Refer DSE Basket)	BTS7 T020R	2	-	-	2	3	80	20	40	-	-	-
8	RM	Research Methodology	BTS7 T021R	2	-	-	2	3	80	20	40	-	-	-
9	RM	Research Methodology	BTS7 P021R	-	-	4	2	-	-	-	-	-	100	50
10	RP	Dissertation	BRP7 P01R	-	-	8	4	-	-	-	-	100	100	100
Total				10	-	20	**20**		**400**	**100**		**150**	**350**	

Textile Science SEM VIII (Research)

SN	Course Category	Name of Course	Course Code	Teaching Scheme (hrs.)			Total Credit	Examination Scheme						
				(Th)	TU	P		Theory				Practical		
								Exam Hrs.	SEE	CIE	Min	SEE	CIE	Min
1	DSC	Hand crafts and textiles	BTS8 T022R	2	-	-	2	3	80	20	40	-	-	-
2	DSC	Hand crafts and textiles	BTS8 P022R	-	-	2	1	-	-	-	-	-	50	25
3	DSC	Designing of Non apparel and Upholstery	BTS8 T023R	2	-	-	2	3	80	20	40	-	-	-
	DSC	Designing of Non apparel and Upholstery	BTS8 P023R	-	-	2	1	-	-	-	-	-	50	25
3	DSC	Sustainable Textiles	BTS8 T024R	2	-	-	2	3	80	20	40	-	-	-
4	DSE	Elective 4 (Refer DSE Basket)	BTS8 T025R	2	-	-	2	3	80	20	40	-	-	-
	DSE	Elective 4 (Refer DSE Basket)	BTS8 P025R			4	2	-	-	-	-	50	50	50
5	RP	Dissertation	BRP8 P02R	-	-	16	8 (4+2+2)	-	-	-	-	200	200	200
Total				8	-	24	**20**		**320**	**80**		**250**	**350**	

Four Year UG Honours with Research Degree in Major and Minor with 160-176 credits

Total Credits:

1. Three Year UG Degree Program: 132
2. Four Year UG Degree Program: 172

Abbreviations: Generic/Open Electives: OE, Vocational Skills & Skill Enhancement Courses: VSEC, Vocational Skill Courses: VSC, Skill Enhancement Courses: SEC, Ability Enhancement Courses: AEC, Indian Knowledge Systems: IKS,Value Education Courses: VEC, On Job Training (Internship/Apprenticeship): OJT, Field Project: FP, Community Engagement & Service: CEP, Co-curricular Courses: CC, Research Methodology: RM, Research Project: RP

VSC Basket (Textile Science**)**

Semester	Course Category	Name of Course	BoS	Course Code
I	**VSC**	Elements of clothing construction	BTS	**BVS1P01**
II	**VSC**	Fabric Craft	BTS	**BVS2P03**
III	**VSC**	Computer Aided Textile Design	BTS	**BVS3P05**
V	**VSC**	Home Linen Design	BTS	**BVS5P07**
VI	**VSC**	Design Development	BTS	**BVS6P08**

Basket for ELECTIVE (DSE) category courses (Textile Science)

Semester	Course Category	Name of Course	Course Code
V	Elective 1	Printing Technology-I	BTS5 TO12
VI	Elective 3	Printing Technology-II	BTS6 TO16
VII (Honors)	Elective 5	Applied Art on Textiles	BTS7 TO21
VIII (Honors)	Elective 7	Research Project	BTS8 TO27
VII (Research)	Elective 5	Non Wovens	BTS7 TO20R
VIII (Research)	Elective 7	Handicrafts and Textiles	BTS8 TO25R

Textile Science
Four Year (Eight Semester Degree Course)
Semester – I
Elements of Design
DSC
BTS1 T01

Theory Marks	**: 100**		**Practical**	**: 50**	**Total**
Credits	**: 3**	SEE	: 80	SEE	: 25
		Theory	: 2		
CIE	: 20		CIE	: 25	Practical : 1

Time Required: 60Hours

Theory
(30 Hours)

Objectives :

1.To study the basic elements and principles of design.
2.To study the different types of motifs.

Unit I :
(8 Hours)

1.1 Design definition – Meaning &Importance
1.2 Importance and role of design elements –Point, Line, Shape, Size, Colour, Value, Texture
1.3 Introduction to Textile Design
1.4 Introduction to Fashion Design

Unit II :
(7 Hours)

2.1 Classification of Motifs
2.2 Study of different motifs of textile design

- Natural
- Decorative
- Geometric
- Abstract

2.3 Principles of design – importance and role in designing

- Proportion
- Repetition
- Balance
- Variety
- Unity
- Gradation
- Emphasis
- Dominance & Sub dominance

Unit III :
(8 Hours)

3.1 Illusion
3.2 Perception
3.3 After image
3.4 Optical Illusion

Unit IV:
(7 Hours)
4.1Percentage of cover area in design
4.2Preparation of motifs using design elements
4.3Preparation for design Borders, all over designs, Bed sheet

Practical:

(30 Hours)

1. Design of points and line
2. Advance exercises in basic designs and rendering of simple designs
3. Study of traditional motifs of natural, decorative, geometric
4. One sheet of formal and informal balance
5. Study of positive and negative spaces
6. Prepare dress materials
7. Prepare bed sheet
8. Border – natural, geometric – 2 sheets
9. Design – scarf, table cloth – 2 sheets

References:

1. Designer's Guide- Volume 1- James Stockton
2. Basic Design and Anthropometry- S.V. Bapat
3. Design Sanvad- Mihir Bhole
4. A Basic Study- Bhagwat Gajanan and Arvind Desai
5. Fundamentals of designing for textiles and other end uses – J.W.Parchure

Textile Science
Four Year (Eighth Semester Degree Course)
Semester – I
Fundamentals of Textile – I
DSC
BTS1 T02

Theory Marks	**: 100**	**Practical**	**: 50**		**Total**
Credits	**: 3**				
SEE	: 80	SEE	: --	Theory	: 2
CIE	: 20	CIE	: 50	Practical	: 1

Time Required: 60 Hours

Theory
(30 Hours)
Objectives:
1. To know about textile fibers.
2. To know about the types of yarns, their properties & end uses.
3. To understand the yarn numbering system.

Learning outcomes:
After undergoing the subject, the students will be able to deal with the different types of fibres and yarns for producing variety of textile fabrics. The students are expected to know the different materials of the textile.

Unit I:
(7 Hours)
Textile fibres
1.1 Definitions of fibre, filament
1.2 Classification of textile fibres according to origin
1.3 Essential & desirable properties of textile fibres
1.4 Identification of different fibres

Unit II:
(8 Hours)
Yarns
2.1 Introduction to cotton spinning and its processes
2.2 Carded Yarn Spinning
2.3 CombedYarn Spinning
2.4 Introduction to open end spinning

Unit III:
(7 Hours)
Different types of yarn and their properties and end uses
3.1 Fancy and Novelty yarn
3.2 Textured yarn
3.3 Embroidery yarn
3.4 Sewing yarn
3.5 Blended yarn (PV, PC, PW, CV, CS)

Unit IV:
(8 Hours)
Concept of Yarn Numbering system
4.1 Introduction to various yarns numbering system for various textile yarns
4.2 Importance of Yarn numbering system
4.3 Indirect yarn numbering system
4.4 Direct yarn numbering system

Practical:

(30 Hours)

1. Collection of different textile fibres.
2. Identification of different fibres.
3. Collection of different types of yarn.
4. Understanding various yarn packages.

References:

1. Textiles Norma -Hollen
2. Weaving calculations -Sen Gupta
3. Watson’s Textile Design and Colour - Z Grosicki
4. Textiles Fiber to Fabric – Bernard Corbman
5. Textiles – Sara J. Kadolph

Textile Science
Four Year (Eight Semester Degree Course)
Semester – II
ELEMENTS OF CLOTHING CONSTRUCTION
VSEC
BVS1 PO1

Theory Marks	**: --**	**Practical**	**: 100**	**Total**
Credits	**: 2**			
SEE	: --	SEE	: 50	Theory : -
CIE	: --	CIE	: 50	Practical : 2

Time Required: 60Hours

Practical
(60Hours)

OBJECTIVES

- To develop skills in clothing construction
- To Equip the students with various stitching techniques

UNIT 1
(15 Hours)

1.1 Tools and equipments required for sewing
1.2 Taking body measurements.
1.3 Introduction to domestic sewing machine : Sewing machine parts and their functions

UNIT 2
(15 Hours)

2.1 Temporary Hand stitches

- Pin basting
- Even basting
- Uneven basting
- Diagonal basting

2.2 Permanent stitches

- Machine basting
- Running stitch

2.3 Edge Finishing

- overlock
- Hemmimg
- Pico

UNIT 3
(15 Hours)

Shaping Devices

3.1 Darts

- Single Dart
- Double Dart

3.2 Tucks

- Pin tucks

- Cross tucks
- Shell tucks
- Released tucks.

UNIT 4
(15 Hours)

4.1 Pleats

- Knife pleat
- Box Pleat
- Inverted Box Pleat

4.2 Ruffles

- Single Ruffle
- Double Ruffle

4.3 Gathers

Practical

Prepare a Portfolio of all the samples mentioned in syllabus

Refernce

1. Complete Guide To Sewing – Reader's Digest
2. Encyclopedia Of Dress Making – Raul Jewel
3. Basics of Fashion Design Construction – Annette Fischer

Textile Science

Four Year (Eight Semester Degree Course)

Semester - I
Functional English
AEC
BAE1T01

Theory Marks	**: 100**	**Total**
Credits	**: 2**	
SEE	: 80	Theory
: 2		
CIE	: 20	

Time Required: 30 Hours
Theory
(30 Hours)

Objectives: 1) To help students in developing speaking and writing proficiency in English language.

Unit 1:
(8 Hours)

-Remedial grammar
1.1Articles & determiners.
1.2 Forms & functions of nouns, pronouns, prepositions.
1.3 Verbs,adverbs and adjectives
1.4 Tenses

Unit 2:
(7 Hours)
Functional grammar
2.1 Transformation of sentences
2.2 Figures of speech: - Simile, Metaphor, Irony, Personification, Hyperbole & Alliteration

Unit 3:
(8 Hours)
3.1 Introduction to Phonetics
3.2 Understanding sociolinguistics:-
Langue, parole, pidgin, creol and dialect

Unit 4:
(7 Hours)
Creative writing
4.1 Use of Idioms and phrases
4.2 Report writing
4.3 Formal letter & Application writing
4.4 Composing advertisements

Students are expected to practice effective oral and written communication

i. Paper reading session (presented by the students)
ii. Practice of face to face conversation

iii. Listening & summarizing (listening carefully to passage & summarizing the important points)

iv. Letter writing

Continuous assessment of the above mentioned assignment & one presentation on any given topic.

Reference:

1. Secrets of face to face communication -Peter urs Bender (Mecmillan Publications)
2 Learning to learn by Kenneth a Kiewra Nelson F. Dubros Publishers -Allyn & Bacon.
3 English for practical purpose - Z.N. Patil and B.S. Valke Ashok Thorat, Zeaneet Merchant (Macmillan Publications)
4 Teaching Material
5 Business communication - Dr. Urmila Rai
6 Professional Communication skills - A.K. Jain, S.R. Bhatia, A.M. Sheikh

Textile Science

Four Year (Eight Semester Degree Course)

Semester - I
ENVIRONMENTAL SCIENCE
VEC
BEV1 T01

Theory Marks	**: 100**	**Total Credits**	**: 2**
SEE	: 80	Theory	: 2
CIE	: 20		

Time Required: 30 Hours

Theory **(30 Hours)**

COURSE OUTCOMES:

At the end of the course, students shall be able to:

- Explain the basics of Environmental Science and Atmospheric Science along-with the components of Environment
- Explicate the importance of Environmental Education.
- Elucidate the fundamentals of atmospheric science including formation, depletion and effects of ozone layer and acid rain on environment.
- Describe the various physical and chemical characteristics and properties of Water and Soil
- Understand the Ecology and its allied branches
- Comprehend about Population and Community Ecology
- Study the changes in Population by understanding the concept of Population ecology

Unit-I: Basics of Environmental Science (7.5 Hrs)

A. Introduction of Environmental Science: Definition, Types, Classification, Characteristics, Components and principles of environment. Scope and need for environmental science, Multidisciplinary nature of environmental science, Environmental ethics.
B. Environmental Education: Goals, Objectives and principles of environmental education, formal and non-formal environmental education, environmental programme, importance of environmental education, environmental awareness.
C. Components of Environment: Atmosphere (Structure and composition),hydrosphere – distribution of water, hydrological cycle, global water balance, lithosphere – Internal structure of Earth, types of rocks, Biosphere- Boundaries of biosphere.

Unit-II: Basics of Atmospheric Science (7.5 Hrs)

A. Atmospheric Chemistry: Structure of atmosphere based on temperature, photochemical reaction in the atmosphere, temperature inversion and lapse rate, smog formation, types of smog (sulphur and photochemical smog), adverse effect of smog on human being, aerosol.
B. Green House Effect: Greenhouse gases, relative contribution and effects of greenhouse effect, control of greenhouse gases. Ozone depletion: chemistry of ozone depletion, Dobson Unit, ozone depleting substances (ODS), ozone hole, consequences of ozone depletion, mitigation measures and international protocols.
C. Acid Rain: Chemistry of Acid Rain, effect of acid rain on ecosystem, control measures. Precipitation – Forms of precipitation (rain, drizzle, snow, sleet, and hail), types of precipitation (conventional, orographic, and cyclonic).

Unit-III: Basics of Ecology (7.5 Hrs)

A. Ecology: Definition, subdivision and modern branches of ecology, ecology spectrum, scope of ecology. Application and significance of ecology to human beings.
B. Abiotic Factors: Temperature: effect of temperature on plants and animals, Adaptation to meet extreme temperature. Light: Zonation in marine habitat, effects of light on plants and animals, Microclimate and fire, Shelford law of tolerance, Leibigs law of minimum.
C. Biotic Factor: Inter specific relationship Positive: Mutualism (symbiosis), commensalism, proto-cooperation Negative: Parasitism, predation, competition, Antibiosis, Neutralism.

Unit-IV: Ecosystems and food chain (7.5 Hrs)

A. Ecosystem: Definition, structure and function of ecosystem, types of ecosystem: Terrestrial (forest, grassland, desert, cropland), Aquatic (Marine and freshwater)
B. Food chain: Definition & types: Grazing food chain, detritus food chain, and parasitic food chain, food web in forest and grassland ecosystem. Ecological pyramids (number biomass and energy), energy flow in ecosystem (Y- shaped). Energy flow and the law of thermodynamics.
C. Biogeochemical Cycles: Definition, classification, gaseous cycle (oxygen, carbon and nitrogen) Sedimentary cycle (phosphorus and sulphur).

Reference Books:

1. Text Book of Environment: K M Agrawal, P.K. Sikdar, and S.C. Deb, Mc'Millan Publication, Mumbai.
2. Man and Environment: M.C. Dash and P.C. Mishra, Mc'Millan Publication, Mumbai.
3. Environmental Science: S.C. Santra, New Central Book Pvt.Ltd, Kolkatta.
4. Environmental Problems and Solution: D.K. Asthana, S.Chand Publication, New Delhi.
5. Environmental Chemistry: S.S. Dara, S.Chand Publication ,New Delhi.
6. Environmental Chemistry: A.K. Dey, New Age International Publishers,2001.
7. A Textbook of Environmental Studies: Dr S.Satyanarayan, Dr S.Zade, Dr S Sitre and Dr P.U. Meshram, Allied Publishers, New Delhi.
8. Environmental Biology: Biswarup Mukherjee, Tata McGraw-Hill Publishing Company Ltd, New Delhi,1996.
9. Animal Ecology and Distribution of Animals: Veer Bala Rastogi , Rastogi Publication, Meerut (U.P).
10. Ecology and Environment: P.D.Sharma, Rastogi Publication ,Meerut (U.P).
11. Fundamentals of Environmental Biology: S. Arora, Kalyani Publishers.
12. Environmental Biology: P.K.G. Nair, Himalaya Publication.
13. Environmental Biology: K.C. Agrawal, Agro Botanical Publisher ,Bikaner,1994

Textile Science

Four Year (Eight Semester Degree Course)

Semester - I
Traditional Indian Textiles – I
IKS
BIK1 TO1

Theory Marks	**: 100**	**Total Credits**	**: 2**
SEE	: 80	Theory	: 2
CIE	: 20		

Time Required: 30 Hours
Theory **(30 Hours)**

Objectives

1. To learn about traditional Indian Textiles
2. To understand various ornamentation techniques

Unit I: **(8 Hours)**

Evolution of Textile Design

1.1 History of Indian textile design
1.2 Importance of study of Textile Design
1.3 Journey of designing skills since ages
1.4 Influence of Religion, Art and Royalty on Textile Design
1.5 Influence of trade and media on textile design

Unit II: **(7 Hours)**

Textile design

2.1 Design -Definition & classification
2.2 Methods of creating design on fabric

- Structural ornamentation
- Surface ornamentation

Unit III: **(8 Hours)**

Textiles woven on pit loom

3.1 Meaning and introduction of sari weaving – parts of sari
3.2 Pit – loom weaving
- 3.2.1 Chanderi Sari (with reference to its motifs, techniques and color combination etc.)
- 3.2.2. Maheshwari Sari (with reference to its motifs, techniques and color combination etc.)
- 3.2.3 Mau sari
- 3.2.4 Shantipur Sari

Unit IV: **(7 Credit)**

Hand woven Textiles

4.1 Limitation and scope of hand loom weaving
4.1.1 Bhandara Karvat Kathi Sari
- 4.1.2 Nagpuri Sari
- 4.1.3 Jamdani Sari
- 4.1.4 Balrampuri Sari with refrence to its motif, technique, colour combination and products

References:

1. The sari styles – patterns – History – Techniques Linda Lynton
2. Textile Arts of India Kokyo Hatanaka
3 Indian Saris Traditions Perspectives, Design – Vijai Singh Katiyar
4 Decorative Design History In India Textiles & Costumes Parul Bhatnagar
5 Handcrafted Indian Textiles (Tradition And Beyond) Martand Singh Rta Kapur Chisti Rahul Jain
6 Traditional Textiles ShakeelaShaik
7 Costume, Textile and Jewellery of India Tradition in Rajasthan Vandana Bhandari
8 Traditional Indian Textiles John Gillow and Nicholas Barnard
9. Traditonal Indian Constumes& Textiles Parul Bhatnagar

Textile Science

Four Year (Eight Semester Degree Course)

Semester – I
Sports/ Cultural/ Yoga/ Music/ NSS/ NCC

CC
BCC1 PO1

Practical Marks: 100 **Total Credits : 2**

SEE : -- Practical : 2

CIE : 100

Time Required: 60 Hours

Practical: 60 Hours

As per university Rules

Textile Science
Four Year (Eight Semester Degree Course)
Semester – II
Colour Composition
DSC
BTS2 T03

Theory Marks	**: 100**	**Practical: 50**		**Total Credits**	**: 3**
SEE	: 80	SEE:--25		Theory	: 2
CIE	: 20	CIE: 25		Practical	: 1

Time Required: 60 Hours

Theory **(30 Hours)**

Objectives:

1 Students should know the basics of color theories& their role in designing.
2 To make students understand color combinations and textures.

Unit I : **(7 Hours)**

1.1 Definition of color
1.2 The meaning of color
1.3 Theories of color [light & pigment]
1.4 Chromatic circle
1.5 Complementary colors
1.6 After Image of colors

Unit II : **(8 Hours)**

2.1 Role of color in designing
2.2 Color modification
2.3 Value Scale
2.4 Qualities of color [Hue, Value, chrome]
2.5 Color Measurement

Unit III : **(7 Hours)**

3.1 Color Schemes
3.2 Basic Techniques for creating color schemes
3.3 Color Contrast

Unit IV : **(8 Hours)**

4.1 Psychological impact of color- style and colour
4.2 Role of color to create mood - Powerful, Romantic, Vital, Earthy, Friendly, Soft, Elegant, Trendy
4.3 Understanding of texture effects

Practical : **(30 Hours)**

Chromatic circle
Grey Scale
Colour Modification
Key System
Color Wheel
Colour Harmonies
Different Color Schemes
Prepare linear drawing with colored inks or poster colors
Prepare design related to 3 dimensional effects
Prepare different motifs with various tonal effects in different color media

Reference:

1. Color Harmony a Guide to creative color combinations-Bride M. Whelan
2. Designer guide to color-Volume - 1 - 5 -James Stockton
3. A Basic Study- Bhagwat Gajanan
4. Basic Design & Anthropometry-S.V. Bapat
5. Colour Harmony -A Guide to creative colour combinations by Hideaki Ghijirwa,
6. Fundamentals of designing for Textiles and other end uses – J.W.Parchure

Textile Science
FourYear(EightSemesterDegreeCourse)
Semester – II
Fundamentals of Textile – II
DSC
BTS2 T04

Theory Marks	**: 100**	**Practical**	**: 50**	**Total Credits**	**: 3**
SEE	: 80	SEE	:	Theory	: 2
CIE	: 20	CIE	: 50	Practical	: 1

Time Required: 60 Hours
Theory **(30 Hours)**

Objectives: Students should be able to
1. Differentiate between different types of fabrics.
2. Understand the process of weaving.
3. Understand Loom and its attachments.
4. Know the Relation between Design, Draft & lifting plan.
5. Develop the simple weaves on point paper.
6. To understand the classification of standard fabrics

Learning outcomes:
After undergoing the subject, the students will be able to deal with the different types of designs over variety of textile fabrics. Before going through the design aspect one must know about the different types of Machines used in fabric manufacture.

Unit I: **(7 Hours)**
Fabrics
1.1 Fabric - Definition
1.2 Definition of weaving, properties and end uses of woven fabrics
1.3 Definition of knitting, types of knitting, properties and end uses of knitted fabrics
1.4 Definition on non-woven, properties and end uses of non-woven.
1.5 Flowchart for manufacturing and input, output objectives and machinery used for
- Simple fabrics
- Striped fabrics
- Checks fabrics

Unit II: **(8 Hours)**
Weaving preparatory processes
2.1 Introduction to Winding - Passage of material
2.2 Introduction to Warping - passage of material through beam warping and sectional warping
2.3 Introduction to Sizing - passage of material through sizing machine
2.4 Introduction to Drawing - in & denting
2.5 Introduction to Tying - in

Unit III: **(7 Hours)**
Loom
3.1 Classification of loom
3.2 Passage material through loom
3.3 Motions of loom

Unit IV: **(8 Hours)**
4.1 Definition of design, draft and lifting plan
4.2 Weave representation methods
4.3Simple weaves, (Plain, Twill, and Satin)
4.4 Characteristics and end uses of simple weaves

Practical: **(30 Hours)**

1. Collection of standard fabrics such as muslin, poplin, organdie, cambric, mulmul,

   Crepe, georgette, satin, denim, flannel, felt, fur, woolen, worsted.
2. Collection of Woven, knitted and non-woven fabrics.
3. Collection of Simple, Stripes and Checks fabrics.
4. Collection of figured fabrics.
5. Preparation of simple weave samples (Plain, Twill, and Satin) using various materials.

References:

1. Textiles -Norma Hollen
2. Textile Science -E.P.G.Gohl - L.D. Vilensky
3. Weaving Mechanism - N. N. Banerjee
4. Weaving Mechanism- N. N. Banerjee
5. Watson's Textile Design and Colour-Z.Grosicki
6. Plain Weaving Motions - K. T. Aswani

Textile Science

Four Year (Eight Semester Degree Course)

Semester - II
FABRIC CRAFT
VSC
BVS2 PO3

Theory Marks	**: --**	**Practical**	**: 100**	**Total Credits**	**: 2**
SEE	: --	SEE	: 50	Theory	: -
CIE	: --	CIE	: 50	Practical	: 2

Time Required: 60Hours

Practical (60Hours)

OBJECTIVES: To impart ability of creating art pieces made up of fabric.
To understand suitability of fabric for art pieces

UNIT I:
1.1 Understanding nature of fabric
1.2 Understanding Geometry of different art pieces- Estimation for bulk production
1.3 Designing of fabric art pieces
1.4 Appliques

UNIT II:
2.1 Flower
2.2 Buttons
2.3 Bows
2.4 Belts
2.5 Cords
2.6 Braids
2.7 Tassels

UNIT III:
3.1 Home Décor Items:
3.2 Table mats
3.3 Doormats
3.4 Wall Hangings
3.5 Wall Pieces
3.6 Lamp Shade
3.7 Cushion covers

UNIT IV:
4.1 Mask
4.2 Jewellery
4.3 Spects Cover
4.4 Wardrobe organiser
4.5 Bottle Covers
4.6 Shoe Cover
4.7 Saree Cover
4.8 Kitchens

References:

Complete Guide to Sewing- Readers Digest
Fabric Blooms Megan Hunt

Textile Science

Four Year (Eight Semester Degree Course)
Semester - II
English and Communication Skills
AEC (BAE2 T02)

Theory Marks : 100 | **Total Credits : 2**
SEE : 80 | Theory : 2
CIE : 20

Time Required: 30 Hours
Theory **(30 Hours)**
Objectives

1. To improve Communication skills of students.
2. TIP: This subject should be taught in English only

UNIT I : **(8 Hours)**

Communication

1.1 Meaning and definition of communication
1.2 Process, elements, objectives and methods of communication
1.3 Principles of effective communication
1.4 Channels of Communication
1.5 Barriers of communication

Unit-II: **(7 Hours)**

2.1 Verbal vs non-verbal communication

- Oral Communication
- Conversation at a bank, at office, at a bus-stop and at a shop
- Telephonic Conversation: formal and informal
- Written Communication
- Content Writing: style and structure
- Resume writing

Unit III : **(8 Hours)**

Listening

3.1 Principles and Importance of Listening
3.2 Social etiquettes and manners
3.3 Areas of self development
3.4 Motivation

Unit IV: **(7 Hours)**

4.1Presentation skills : To acquire convincing presentation skills

- Leadership Skills
- Group Discussions
- Team work building
- Interview Technique

Reference :

1. Secrets of face to face communication - Peter Bender
2. Learning to learn by Kenneth a Kiewra Nelson F. Dubros
3. English for practical purpose by Z.N. Patil and B.S. Valke Ashok Thorat, Zeaneet Merchant
4. Teaching Material
5. Business Communication - Dr. Urmila Rai
6. Professional Communication Skills - A.K Jain, S.R. Bhatia
7. Managerial Communication – Urmila Rao, S.M.Rai – Himalaya Publishing House
8. Communication Skills – Mrs.Jaya Kulkarni Moholkar – Central Techno Publication

Textile Science

Four Year (Eight Semester Degree Course)

Semester - II
Constitution Of India
VEC
BEV2 T02

Theory Marks : 100
SEE : 80
CIE :20

Total Credits : 2
Theory : 2

Time Required: 30 Hours
Theory **(30 Hours)**

UNIT – I:

- Historical Background to the Framing of the Indian Constitution: General Idea about the Constituent Assembly of India.

UNIT – II

- Preamble – Nature and key concepts/Constitutional values, Socialism, Secularism, Democracy, Justice, Liberty, Equality and Fraternity

- Salient Features of the Constitution of India

UNIT – III

- General study about the kinds, nature and importance of; Fundamental Rights, Directive Principles of State Policy and Fundamental Duties.

UNIT –IV

Introduction of the Constitutional Institutions and Authorities;

- Central Legislature and Executive (Parliament of India, President of India and Council of Ministers)
- State Legislature and Executive (State legislative Assemblies, Governors and Council of Ministers)
- Higher Judiciary (Supreme Court of India and High Courts)

Textile Science
Four Year (Eight Semester Degree Course)
Semester - II
Traditional Indian Textiles – II
IKS (BIK2 TO2)

Theory Marks : 100 | **Total Credit : 2**
SEE : 80 | Theory : 2
CIE : 20

Time Required: 30 Hours

Theory **(30 Hours)**

Objectives

1. To learn about the traditional Indian textiles
2. To understand the culture of India pertaining to the different states

Unit I : **(8 Hours)**

Tribal Weaving

Study of following textiles with reference to region, raw material, techniques, motifs end use etc.

1.1 Backstrap loom weaving
1.2 Assam – Mekhala
1.3 Meghalaya Garo

Unit II : **(7 Hours)**

Tribal Weaving

Study of following textiles with reference to region, raw material, techniques, motifs end use etc.

2.1 Manipuri Phanek
2.2 Innaphi
2.3 Nagaland Blanket

Unit III : **(8 Hours)**

Shawls of India

Study of following textiles with reference to region, raw material, techniques, motifs end use etc.

3.1 Kullu Shawl
3.2 Kanikar
3.3 Gujarat Shawl
3.4 Do rukha

Unit IV : **(7 Hours)**

Floor Coverings

Study of following textiles with reference to region, raw material, techniques, motifs end use etc.

4.1 Namda
4.2 Dharri
4.3 Kashmiri Galicha

Reference:

1. The sari styles - patterns - History - Techniques Linda Lynton
2. Dhurrie Flat woven Rugs Of India Shyam Ahuja
3. Textiles and crafts of India (Arunachal Pradesh Assam. Manipur) Dr. Vardona Bhandari NIFT Pub. Division
4. Textile Arts of India KokyoHatanaka
5. Indian Sarees Traditions Perspectives, Design Vijai Singh Katiyar
6. Decorative Design History In India Textiles & Costumes PorulBhatnagar
7. (Tradition And Beyond) Handcrafted Indian Textiles Martand Singh RtaKapurChisti Rahul Jain
8. Traditional Textiles ShakeelaShaik
9. Costume, textile and Jewelry of India Tradition S/n Rajasthan Vandanabhandari
10. Traditional Indian Textiles John Gillow and Nicholas Bornard
11. Traditonal Indian Constumes& Textiles ParulBhatnagar

Textile Science

Four Year (Eight Semester Degree Course)

Semester - II
Sports/ Cultural/ Yoga/ Music/ NSS/ NCC

CC
BCC2 PO2

Practical Marks: 100		**Total Credits**	**: 2**
SEE	: --	Practical	: 2
CIE	: 100		

Time Required: 30 Hours
Practical **(30 Hours)**

As per University rules