University of Rajasthan
Jaipur

SYLLABUS

(Three/Four Year Under Graduate Programme)

Science/Arts/Commerce

Textile Craft

I to VI Semester

Examination-2025-26

As per NEP - 2020

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Structure of Four Year's Bachelor of Arts (Textile-craft)

Programme Code	UG9101	Programme Faculty	Arts	Programme Name	Four Year Bachelor of Arts (Textile-craft)

Eligibility / Pre-requisite of the Programme-12th Class from CBSE or Rajasthan Board or recognised Board

Degree Name -Four Year Bachelor of Arts (Textile-craft)

Entry and Exit Policy

SEMESTER-I

Course Code	Course Title	Course Type	L	T	P	Credit
TEXT-51T-101	Textile Spinning and Weaving **(Theory-1)**	Discipline Centric Core (Major)	4	0	0	4
TEXT-51P-102	Textile Spinning and Weaving **(Practical-1)**	Discipline Centric Core (Major)	0	0	2	2
					Total Credit	**6**

SEMESTER-II

Course Code	Course Title	Course Type	L	T	P	Credit
TEXT-52T-103	Textile Dyeing and Finishing **(Theory-1)**	Discipline Centric Core (Major)	4	0	0	4
TEXT-52P-104	Textile Dyeing and Finishing **(Practical-1)**	Discipline Centric Core (Major)	0	0	2	2
					Total Credit	**6**

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PROGRAME CODE – UG9101

Programme Faculty – Arts

Programme Name-Four Year Bachelor of Arts (Textile-craft)

SEMESTER – I

CORE COURSE I

Code of the Course	Title of the Course	Level of Course	Credits of course
TEXT-51T-101	Textile Spinning and Weaving **(Theory-1)**	**5**	**4**
TEXT-5IP-102	Textile Spinning and Weaving **(Practical-1)**	**5**	**2**
Type of Course		**Delivery Type of the Course**	
Major		**Theory-**Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours **Practical-** Laboratory work and field visits (if any)	
Prerequisites	Central Board of Secondary Education or equivalent.		
Objectives of the Course (Theory)	• To understand the meaning and importance of textile, introduction to textiles and textile terminology, types of textile fibre and their properties, natural fibres • To know about man-made and synthetic fibres, their production and properties in brief • To understand the basic concept of yarn manufacture (spinning) • To understand the basic concept of fabric manufacture (weaving)		
Objectives of the Course (Practical)	• To help students to understand elementary textile manufacture procedures as textile is the basic need of human being. • To make students aware of different types of textile goods and their common properties		

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Syllabus

TEXT-51T-101 : Textile Spinning and Weaving (Theory-1)

Max. Marks: 20+80marks **Min. Pass Marks: 8+32marks**

UNIT-I (Understanding Textiles)

1 Introduction to Textiles and Terminology: Fibre- staple and filament, Yarn, Fabric, Spinning, Weaving, Loom etc.

2 Fibre identification of natural and animal fibre by feel and burning test.

3. Definition of fibre, basic properties of textile fibres so that it can be used to manufacture usable textile goods

4. Classification of fibres: Natural and Synthetic

5. Production, properties and uses of Vegetable fibres, Animal Fibres and Mineral fibres

UNIT-II (Synthetic Fibres)

1. Introduction to synthetic fibres

2. Classification of synthetic fibres

3. Man-made fibres (Rayon): Production, properties and uses

4. Chemical fibres- polyester, nylon, acrylic, polypropylene:

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Production, properties and uses.

UNIT-III (Yarn manufacture-Spinning)

1. Introduction to spinning process
2. Types of spinning- Traditional and Mechanical
3. Traditional spinning process by Takli and Charkha
4. Introduction to mechanical spinning process of cotton fibre- picking, ginning, opening, mixing, blending
5. Types of yarns- single, double and fancy yarns

UNIT-IV (Fabric manufacture- Weaving)

1. Introduction to fabric manufacture process-weaving
2. Different methods of fabric manufacture process- Felting, Braid-Lace, Knitting and Weaving.
3. Types of weaving machines (Loom)
4. Handloom, different parts, warp path and motions of handloom
5. Elementary weaves: Plain, twill, satin and sateen

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd

2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd

3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers

4. Cotton Spinning : William Scott Taggart; Macmillan and co. Ltd

5. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;

6 Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur

7 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur

8 Weaving Mechanism: N N Banerjee ; Textile Book House

9 Clothing and Textiles Research Journal

10 Journal of textile design, research and practice

11 Textile: the journal of cloth and culture

12 https://www.textilesciences.com

13 htpp://www.textilesphere.com

14 https://www.textileebook.com

Learning Outcome of the Course –

- Students will be able to learn about different fibres, their origin, properties and end use.
- Students will also be able to understand the procedure of yarn manufacture, types of yarns and their end uses.

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- Also the students will learn the process of fabric manufacture on loom and basic designs being imparted while weaving.
- Students will also analyze and understand the different types of yarns and fabrics being used in the daily life according to uses.

SEMESTER – I

CORE COURSE I

Syllabus

TEXT-5IP-102: Textile Spinning and Weaving (Practical-1)

Max. Marks: 50 **Min. Marks: 18**

(i) Fibre identification test of vegetable fibres: cotton and jute
- Appearance test
- Feeling test
- Burning test

(ii) Fibre identification test of animal fibres: wool and silk
- Appearance test
- Feeling test
- Burning test

(iii) To study the Double yarn

(iv) Knowledge of S- Twist and Z- Twist of yarn

(v) Elementary weaves on graph paper:
- Plain weave
- Regular twill weave
- Satin weave
- Sateen weave

(vi) To prepare the paper strip samples of all elementary weaves

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Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd

2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd

3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers

4. Cotton Spinning : William Scott Taggart; Macmillan and co. Ltd

5. Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur

6 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur

7 Weaving Mechanism: N N Banerjee ; Textile Book House

8 Clothing and Textiles Research Journal

9 Journal of textile design, research and practice

10 Textile: the journal of cloth and culture

11 https://www.fibre2fashion.com

12 htpp://www.textilesciences.com

13 https://www.textileebook.com

Learning Outcome of the Course –

- Students will be able to learn about different fibres, their origin, properties and end use.
- Students will also be able to understand the procedure of yarn manufacture, types of yarns and their end uses.
- Also the students will learn the process of fabric manufacture on loom and basic

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designs being imparted while weaving.

- Students will also analyze and understand the different types of yarns and fabrics being used in the daily life according to uses.
- Students will be able to learn about different elementary weaves and their structure.

SEMESTER – II

CORE COURSE II

Code of the Course	Title of the Course	Level of Course	Credits of course
TEXT-52T-103	Textile Dyeing and Finishing **(Theory-1)**	**5**	**4**
TEXT-52P-104	Textile Dyeing and Finishing **(Practical-1)**	**5**	**2**
Type of Course		**Delivery Type of the Course**	
Major		**Theory-**Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours **Practical-** Laboratory work and field visits (if any)	
Prerequisites	Central Board of Secondary Education or equivalent.		
Objectives of the Course (Theory)	• To understand the concept of light, composition of sun light, concept of colour, perception of colour, colour wheel • To know about dyes & pigments, classification of dyes, general theory of dyeing, dyeing process of fabric by tie and dye method • To understand the difference between dyeing and printing, different direct methods of printing • To understand the basic concept yarn and fabric finishing, introduction to yarn and fabric finishing, importance and role of finishing		
Objectives of the Course(Practical)	• To help students to understand about light, concept of colour • To make students aware of different types of textile dyeing and printing		

Syllabus

TEXT-52T-103 : Textile Dyeing and Finishing (Theory-1)

Max. Marks: 20+80marks **Min. Pass Marks: 8+32marks**

UNIT-I (Light and Colour)

1. Concept of light, composition of sunlight
2. Concept of colour, Colour description -Hue, Value & Croma
3. Perception of colour- Cones and Rods
4. Theory of colour vision
5. Colour wheel, Achromatic and Monochromatic colour

UNIT-II (Dyeing)

1. Dye molecule, importance of Chromophores and Auxochrome
2. General theory of Dyeing
3. Dyes and Pigments
4. Classification of Dyes: natural and synthetic
5. Principles of dyeing
6. Dyeing of cotton fabric by Tie and Dye process

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7. Different methods of tie and dye

UNIT-III (Printing)

1. General theory of printing
2. Difference between dyeing and printing
3. Steps in printing
4. Introduction to the different methods of printing:

   -Direct printing

   -Discharge printing

   -Resist printing

   -Batik

5. Direct methods of printing:

   - Block printing

   - Screen printing

   - Stencil printing

UNIT-IV (Finishing)

1. Concept and need of yarn and fabric finishing
2. Determinants of finishing
3. Objectives of fabric finishes
4. Classification of fabric finishes:
   - Basic finish, Texturing finish, Functional finish

5. Different types of basic finishes:
    - Bleaching, Mercerising, Sizing, Singering, Tantering, Calendering, Beatling

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd
3. Technology of Dyeing: V A Shenai
4 Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
5 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur
6 Technology of Printing: V A Shenai
7 Technology of Textile Processing: V A Shenai
8 Clothing and Textiles Research Journal
9 Journal of textile design, research and practice
10 Textile: the journal of cloth and culture
11 https://textilefocus.com
12 htpp://kohantextilejournal.com
13 https://www.textileebook.com

Learning Outcome of the Course –

- Students will be able to learn about composition of sunlight, concept of colour
- Students will also be able to understand the procedure textile dyeing

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- Also the students will learn the process of textile printing
- Students will also understand the different types of yarns and fabrics finishing being used according to the uses of end product.

SEMESTER- II

CORE COURSE- II

Syllabus

TEXT-52P-104: Textile Dyeing and Finishing (Practical-1)

Max. Marks: 50 **Min. Marks: 18**

(i) To study the colour composition of sunlight.

(ii) Primary colours in light theory and pigment theory.

(iii) To study the secondary colours.

(iv) To understand the different colours with the help of colour wheel, achromatic and monochromatic colours.

(v) Samples preparation with different methods of dyeing by tie and dye process:

- Folding
- Leharia

- Knotting
- Marbelling
- Ball

(vi) Knowledge of preparation of printing paste for textile printing

(vii) To study the process of Block printing.

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd
3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
4. Technology of Dyeing: V A Shenai
5. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;
6. Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
7. Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur
8. Technology of Printing: V A Shenai
9. Clothing and Textiles Research Journal
10. Journal of textile design, research and practice
11. Textile: the journal of cloth and culture
12. https://www.textilesciences.com
13. htpp://www.cottonworks.com
14. https://www.textileebook.com

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Learning Outcome of the Course –

- Students will be able to learn about composition of sunlight, concept of colour
- Students will also be able to understand the procedure textile dyeing
- Also the students will learn the process of textile printing
- Students will also understand the different types of yarns and fabrics finishing being used according to the uses of end product.

Structure of Four Year's Bachelor of Arts (Textile-craft)

Programme Code	**UG9101**	**Programme Faculty**	**Arts**	**Programme Name**	**Four Year Bachelor of Arts (Textile-craft)**

Degree Name -Four Year Bachelor of Arts (Textile-craft)

Entry and Exit Policy

SEMESTER-III

Course Code	Course Title	Course Type	L	T	P	Credit
TEXT-63T-201	Textile Spinning and Weaving **(Theory-II)**	Discipline Centric Core (Major)	4	0	0	4
TEXT-63P-202	Textile Spinning and Weaving **(Practical-II)**	Discipline Centric Core (Major)	0	0	2	2
		Total Credit				**6**

SEMESTER-IV

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Course Code	Course Title	Course Type	L	T	P	Credit
TEXT-64T-203	Textile Dyeing and Finishing **(Theory-II)**	Discipline Centric Core (Major)	4	0	0	4
TEXT-64P-204	Textile Dyeing and Finishing **(Practical-II)**	Discipline Centric Core (Major)	0	0	2	2
		Total Credit				**6**

PROGRAME CODE – UG9101
Programme Faculty – Arts

Programme Name-Four Year Bachelor of Arts (Textile-craft)

SEMESTER – III

CORE COURSE III

Code of the Course	Title of the Course	Level of Course	Credits of course
TEXT-63T-201	Textile Spinning and Weaving **(Theory-II)**	**6**	**4**
TEXT-63P-202	Textile Spinning and Weaving **(Practical-II)**	**6**	**2**
Type of Course		**Delivery Type of the Course**	
Major		**Theory-**Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours **Practical-** Laboratory work and field visits (if any)	
Prerequisites	1-year certificate or equivalent.		
Objectives of the Course (Theory)	• To understand the development of synthetic fibres: man-made fibres, chemical fibres their production& properties • To know about the complete mechanical spinning process • To understand the process of yarn winding, yarn numbering system • To understand the development of loom, different weaves		
Objectives of the Course (Practical)	• To help students to understand elementary textile manufacture procedures, yarn twist, cone winding machine and fabric selvedges. • To make students aware of different types of textile weaves, their		

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	common properties and methods of their production.

Syllabus

TEXT-63T-201 : Textile Spinning and Weaving (Theory-II)

Max. Marks: 20+80marks **Min. Marks: 8+32marks**

UNIT-I (Textile fibres)

1. Development of synthetic fibres
2. Manmade fibres: Rayon fibre
3. Production method, properties and uses of Nitro-cellulose rayon, Cuprammonium rayon, Viscose rayon and Cellulose acetate rayon
4. Chemical fibres: Polyester, Nylon, Acrylic and Polypropylene
5. Production method, properties and uses of chemical fibres

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UNIT-II (Yarn manufacture)

1. Mechanical spinning process: Picking, Ginning, Opening of bales, Mixing, Blending, Lap formation on blow room machine, Carding/Combing, Drawing on draw frame, Roving formation on roving frame and spinning of yarn on ring frame machine.

2. Winding: Precision and non precision winding
   Cone and Cheese winding machine

3. Yarn numbering system: Indirect and Direct system
4. Yarn twist, Types of yarn twist

UNIT-III (Fabric manufacture)

1. Development of loom: Handloom, Treadle loom, Power loom, Shuttle less loom
2. Functions of Harness and Reed in a loom
3. Motions of loom: Primary, Secondary and Auxiliary motions of loom
4. Fabric selvedge, types of selvedge, advantages of selvedge in a fabric.

UNIT-IV (Classification of weaves)

1. Objective and importance of Draft, Peg plan, Denting plan and Repeat in the design of a weave on a loom

2. Derivatives of Plain weave- Rib weave (Warp rib, Weft rib) and Basket weave
3. Derivative of twill weave- Regular twill, Irregular twill, Left hand twill, Right hand twill weave, Herringbone and Diamond weave.
4. Regular- Irregular Satin and Sateen weave

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
3. Cotton Spinning : William Scott Taggart; Macmillan and co. Ltd
4. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;
5 Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
6 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur
7 Weaving Mechanism: N N Banerjee ; Textile Book House
8 Clothing and Textiles Research Journal
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11 https://www.textilesciences.com
12 htpp://www.textilesphere.com
13 https://www.textileebook.com

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Learning Outcome of the Course –

- Students will be able to learn about different synthetic fibres, their production, properties and end use.
- Students will also be able to understand the procedure of mechanical yarn manufacture process, winding process of yarn, yarn twist etc.
- Also the students will learn the process of fabric manufacture on loom and basic designs being imparted while weaving.
- Students will also analyze and understand the development of loom, motions of loom, types of selvedge, different derivatives of plain and twill weave; satin and sateen weave.

Syllabus

TEXT-63P-202: Textile Spinning and Weaving (Practical-II)

Max. Marks: 50 **Min. Marks: 18**

(i) To find the yarn twist in different yarn samples:
- S type
- Z type

(ii) Understanding Cone winding machine process by diagram.

(iii) To understand function of Harness and Reed in loom using diagram.

(iv) Study of fabric selvedge: Types and uses

(v) Draw and study the weaves on graph paper:
- Left hand and right hand twill weave
- Herringbone weave
- Diamond weave

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- Regular and irregular satin/sateen weave

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
3. Cotton Spinning : William Scott Taggart; Macmillan and co. Ltd
4. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;
5. Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
6 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur
7 Weaving Mechanism: N N Banerjee ; Textile Book House
8 Clothing and Textiles Research Journal
9 Journal of textile design, research and practice
10 Textile: the journal of cloth and culture
11 https://www.fibre2fashion.com
12 htpp://www.textilesciences.com
13 https://www.textileebook.com

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Learning Outcome of the Course :

- Students will be able to learn about yarn twist and different types of yarn twist.
- Students will also be able to understand the procedure of yarn winding on cone.
- Also the students will learn the process of fabric manufacture on loom and function and importance of harness and reed while weaving.
- Students will also analyze and understand the different types and uses of fabric selvedges.
- Students will be able to learn about different fabric weaves and their structure as per the requirement for different purposes.

SEMESTER – IV

CORE COURSE IV

Code of the Course	Title of the Course	Level of Course	Credits of course
TEXT-64T-203	Textile Dyeing and Finishing **(Theory-1I)**	**6**	**4**
TEXT-64P-204	Textile Dyeing and Finishing**(Practical-1I)**	**6**	**2**
Type of Course		**Delivery Type of the Course**	
Major		**Theory-**Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours **Practical-** Laboratory work and field visits (if any)	
Prerequisites	1-year certificate or equivalent.		
Objectives of the Course (Theory)	• To know about classification of dyes, fastness properties of dyes, stages of dyeing, dyeing machines, wool and silk dyeing. • To understand the different steps and styles of printing, different wetting agents and thickners used in printing paste. • To understand the basic concept of pre treatment process, role and steps followed in textile pre treatment process. • Introduction to yarn and fabric finishing process, importance and role		

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	of finishing, determinants of finishes, mechanical finishes.
Objectives of the Course(Practical)	• To help students to understand about fibre, yarn and fabric dyeing. • To understand jigger and winch dyeing machine • To make students aware of different steps of textile printing, resist printing, procedure of roller printing machine

Syllabus

TEXT-64T-203 : Textile Dyeing and Finishing (Theory-II)

Max. Marks: 20+80marks **Min. Pass Marks: 8+32marks**

UNIT-I (Dyeing)

1. Water soluble and water insoluble dyes
2. Fastness properties of dyes
3. Stages of dyeing: fibre dyeing, yarn dyeing and fabric dyeing
4. Fabric dyeing machines- Jigger and winch dyeing machine
5. Wool and Silk dyeing process

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UNIT-II (Printing)

1. Steps of printing
   (i) Preparation of fabric
   (ii) Preparation of printing paste
   (iii) Making an impression of the paste on the fabric
   (iv) Drying of the printed fabric
   (v) Steaming of the printed fabric
   (vi) After treatments

2. Styles of printing

   Direct style- Roller printing

   Discharge printing- white and coloured discharge printing

   Resist printing- white and coloured resist printing

3. Role of wetting agent and thickners in a printing paste

UNIT-III (Pretreatment)

1. Pre-treatment processes of textile finishing
2. Role of pre-treatments
3. Steps followed in pre-treatment process in textile inspection and marking: Shearing or cropping, Singeing, Desizing, Scouring, Mercerizing, Bleaching
4. Factors of pre-treatment process in textile

   -Amount of various impurities present

   -Purity of water supply

   -Chemical used in various preparation processes

   -Machinery available for processing

UNIT-IV (Finishing)

1. Finishing processes in textile
2. Objectives and role of fabric finishes
3. Determinants of finishes
4. Mechanical finishes:
    - Beating, Singeing
    - Shearing and brushing
    - Sizing
    - Tentering
    - Napping
    - Calendering, Moireing
    - Embossing, Sanforizing

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd
3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
4. Technology of Dyeing: V A Shenai
5 Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
6 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur
7 Technology of Printing: V A Shenai
8 Technology of Textile Processing: V A Shenai
9 Clothing and Textiles Research Journal
10 Journal of textile design, research and practice
11 https://textilefocus.com

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12 htpp://kohantextilejournal.com

13 https://www.textileebook.com

Learning Outcome of the Course :

- Students will be able to learn about different water soluble and water insoluble dyes.
- Students will also be able to understand the stages of dyeing; fabric dyeing machines
- Also the students will learn the process of textile printing: steps and styles
- Students will also understand the different types of pre treatment proceses being applied according to the uses of end product.
- Students will also understand the different types of finishing proceses being applied according to the uses of end product, objectives and role of finishing; concept and process of different mechanical finishes.

SEMESTER- IV

CORE COURSE- IV

Syllabus

TEXT-64P-204: Textile Dyeing and Finishing (Practical-II)

Max. Marks: 50 **Min. Marks: 18**

(i) Fibre dyeing
(ii) Yarn dyeing
(iii) Fabric dyeing
(iv) Line diagram of Jigger and Winch dyeing machine
(v) Steps of printing process

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- Preparation of fabric
- Preparation of printing table
- Preparation of printing paste

(vi) Resist printing

(vii) Block printing samples

(viii) Line diagram of Roller printing machine

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd
3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
4. Technology of Dyeing: V A Shenai
5. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;
6. Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
7. Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur
8. Technology of Printing: V A Shenai
9. Clothing and Textiles Research Journal

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10 Journal of textile design, research and practice

11 Textile: the journal of cloth and culture

12 https://www.textilesciences.com

13 htpp://www.cottonworks.com

14 https://www.textileebook.com

Learning Outcome of the Course:

- Students will be able to learn about fibre, yarn and fabric dyeing
- Students will also be able to understand the procedure of Jigger and Winch dyeing machine
- Also the students will learn the steps of textile printing, block printing process
- Students will also understand the resist printing process and the procedure of roller printing machine.

Structure of Four Year's Bachelor of Arts (Textile-craft)

Programme Code	**UG9101**	**Programme Faculty**	**Arts**	**Programme Name**	**Four Year Bachelor of Arts (Textile-craft)**

Degree Name -Four Year Bachelor of Arts (Textile-craft)

Entry and Exit Policy

SEMESTER-V

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Course Code	Course Title	Course Type	L	T	P	Credit
TEXT-75T-301	Textile Spinning and Weaving **(Theory-III)**	Discipline Centric Core (Major)	4	0	0	4
TEXT-75P-302	Textile Spinning and Weaving **(Practical-III)**	Discipline Centric Core (Major)	0	0	2	2
					Total Credit	**6**

SEMESTER-VI

Course Code	Course Title	Course Type	L	T	P	Credit
TEXT-76T-303	Textile Dyeing and Finishing **(Theory-III)**	Discipline Centric Core (Major)	4	0	0	4
TEXT-76P-304	Textile Dyeing and Finishing **(Practical-III)**	Discipline Centric Core (Major)	0	0	2	2
					Total Credit	**6**

PROGRAME CODE – UG9101

Programme Faculty – Arts

Programme Name-Four Year Bachelor of Arts (Textile-craft)

SEMESTER – V

CORE COURSE-V

Code of the Course	Title of the Course	Level of Course	Credits of course
TEXT-75T-301	Textile Spinning and Weaving **(Theory-III)**	**7**	**4**
TEXT-75P-302	Textile Spinning and Weaving **(Practical-III)**	**7**	**2**
Type of Course		**Delivery Type of the Course**	

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Major	**Theory-**Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours **Practical-** Laboratory work and field visits (if any)
Prerequisites	2-year diploma or equivalent.
Objectives of the Course (Theory)	• To know about the complete chemical spinning process • To understand yarn count and resultant count calculations • To understand the development of shuttle less loom, winding, warping • To know different shedding mechanism, Towel weaves
Objectives of the Course (Practical)	• To help students to understand different chemical spinning processes. • To know about balance of fabric, calculation of EPI and PPI • To make students aware of winding and warping processes • To understand different towel weaves

Syllabus

TEXT-75T-301 : Textile Spinning and Weaving (Theory-III)

Max. Marks: 20+80marks **Min. Pass Marks: 8+32marks**

UNIT-I (Spinning)

1. Chemical spinning process
2. Different methods of chemical spinning:

- Wet and Dry spinning
- Melt spinning

3. Advantages and disadvantages of different chemical spinning methods

4. Production and uses of different chemical fibres

UNIT-II (Yarn count)

1. Yarn count calculations
   - Cotton count
   - Woollen count
   - Worsted count
   - Tex
   - Denier

2. Resultant count calculations of double (folded) yarn

   (Example 1. Calculate the resultant count of folded yarn composed of two single yarns of 24s and 40s count.

   Answer: $1/Cr = 1/C1 + 1/C2$

   $1/Cr=1/24+1/40$

   $1/Cr=8/120$

   $=1/15$

   So, resultant count (Cr) = 15s

3. Cloth count: Ends per inch (EPI) and Picks per inch (PPI)

4. Balance of fabric

UNIT-III (Weaving)

1. Development of loom: Shuttle less loom
   - Air jet loom
   - Water jet loom
   - Rapier loom
   - Projectile loom
2. Weaving process of different shuttle less looms
3. Loom preparation for weaving
   - Winding
   - Warping
4. Different fabric defects occurred in fabric during weaving process on a loom

UNIT-IV (Shedding mechanism)

1. Shedding mechanism and its development
2. Different types of shedding
3. Dobby loom and types of Dobby loom
4. Jacquard loom and types of Jacquard loom
5. Towel weaves: Honeycomb and Huckaback
6. Quality of yarn and weaving pattern for towel weaves

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd
3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
4. Cotton Spinning : William Scott Taggart; Macmillan and co. Ltd
5. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;
6 Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
7 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur
8 Weaving Mechanism: N N Banerjee ; Textile Book House
9 Clothing and Textiles Research Journal
10 Journal of textile design, research and practice
11 Textile: the journal of cloth and culture
12 https://www.textilesciences.com
13 htpp://www.textilesphere.com
14 https://www.textileebook.com

Learning Outcome of the Course –

- Students will be able to learn about different chemical fibres, their origin, properties and end use.
- Students will also be able to understand the procedure of different chemical spinning processes
- Also the students will learn about yarn and cloth count, resultant count calculation
- Students will also analyze and understand the different types of shuttle less loom, loom preparation and fabric defects.
- To know about the shedding mechanism and types of shedding, Jacquard and Dobby looms

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Syllabus

TEXT-75P-302: Textile Spinning and Weaving (Practical-III)

Max. Marks: 50 **Min. Marks: 18**

1. Working principle and line diagram of Wet spinning
2. Working principle and line diagram of Dry spinning
3. Working principle and line diagram of Melt spinning

4. Calculation of ends per inch (EPI) and picks per inch (PPI)
5. Cone winding machine process and its line diagram
6. Warping process
7. Towel weave:

- Honeycomb weave
- Huckaback weave

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd
3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
4. Cotton Spinning : William Scott Taggart; Macmillan and co. Ltd
5. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;
6. Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur
7 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur

8 Weaving Mechanism: N N Banerjee ; Textile Book House

9 Clothing and Textiles Research Journal

10 Journal of textile design, research and practice

11 Textile: the journal of cloth and culture

12 https://www.fibre2fashion.com

13 htpp://www.textilesciences.com

14 https://www.textileebook.com

Learning Outcome of the Course –

- Students will be able to learn about different methods of chemical spinning
- Students will also be able to understand the calculations of EPI and PPI
- Also the students will learn the process of yarn winding: cone winding machine
- Students will also analyze and understand the warping process before weaving
- Students will be able to learn about different weaves for towel

SEMESTER – VI

CORE COURSE VI

Code of the Course	Title of the Course	Level of Course	Credits of course
TEXT-76T-303	Textile Dyeing and Finishing **(Theory-III)**	**7**	**4**
TEXT-76P-304	Textile Dyeing and Finishing**(Practical-III)**	**7**	**2**
Type of Course		**Delivery Type of the Course**	
		Theory-Lecture, Sixty Lecture including diagnostic	

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Major	and formative assessments - during lecture hours **Practical-** Laboratory work and field visits (if any)
Prerequisites	2-year Diploma or equivalent.
Objectives of the Course (Theory)	• To know about dyes, classification of dyes: acidic, basic, reactive and disperse, general dyeing process, dyes used for natural, manmade and synthetic fabric. • To understand the direct methods of printing, printing process of wool and silk fabric • To understand the three conventional pre-treatment processes and their objectives • Knowledge of importance and classification of fabric finishes, advantages of chemical finishes
Objectives of the Course(Practical)	• To help students to understand about different dyes for natural fibres • To make students aware of block printing process, printing paste preparation • To understand the different types of fabric finishes.

Syllabus

TEXT-76T-303 : Textile Dyeing and Finishing (Theory-III)

Max. Marks: 20+80marks **Min. Pass Marks: 8+32marks**

UNIT-I (Dyeing)

1. Different types of dyes:
   - Acidic dyes

- Basic dyes
- Reactive dyes
- Disperse dyes

2. Different dyes for:

   - Natural fibres
   - Manmade fibres
   - Synthetic fibres

3. Dyeing process polyester fabric

UNIT-II (Printing)

1. Direct methods of printing:

(i) Block printing
(ii) Screen printing
(iii) Stencil printing

3 Printing process of woollen and silk fabric

4 Importance of ageing and steaming after the cloth is printed and dried

5 Thickners: - Advantages of thickners

- Types of thickners: temporary and permanent

UNIT-III (Pretreatment)

1. Conventional pre-treatment processes to fabric before dyeing:
   - Desizing
   - Scouring
   - Bleaching
2. Objectives and process of desizing, scouring and bleaching
3. Pre-treatment process of cotton fabric
4. Role and advantages of mercerizing process of cotton fabric

5. Advantages of various pre-treatment processes applied to the grey fabric

UNIT-IV (Finishing)

1. Importance of fabric finishes in textile
2. Classification of fabric finishes:
   - Functional finishes
   - Chemical finishes
   - Mechanical finishes
3. Types of chemical finishes:
   - Crease resistant finish
   - Water proof finish
   - Fire proof finish
   - Moth proof finish
   - Absorbency finish

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd
2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd
3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers
4. Technology of Dyeing: V A Shenai
5. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;

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6. Vastra-vigyan ke mool Siddhant : Vijay Kumar; Aastha publications, Jaipur

7. Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur

8. Technology of Printing: V A Shenai

9. Technology of Textile Processing: V A Shenai

10. Clothing and Textiles Research Journal

11. Journal of textile design, research and practice

12. https://textilefocus.com

13. htpp://kohantextilejournal.com

14. https://www.textileebook.com

Learning Outcome of the Course –

- Students will be able to learn about dyes, classification of dyes: acidic, basic, reactive and disperse, general dyeing process, dyes used for natural, manmade and synthetic fabric.
- Students will also be able to understand the direct methods of printing, printing process of wool and silk fabric
- Also the students will learn the three conventional pre-treatment processes and their objectives
- Students will also understand the importance and classification of fabric finishes, advantages of chemical finishes

SEMESTER- VI

CORE COURSE- VI

Syllabus

TEXT-76P-304: Textile Dyeing and Finishing (Practical-III)

Max. Marks: 50 **Min. Marks: 18**

(i) Different dyes for natural fibres

(ii) Block printing process and samples

(iii) Printing paste preparation

(iv) Pre-treatment process of cotton fabric

(v) Discharge printing

(vi) Functional finishes: Shrinkage control ; Anti-static finish

(vii) Chemical finishes: Water proof ; Fire proof

(viii) Mechanical finishes: Beating ; Singeing

Suggested books, references, journals and links to e-resources:

1. Fundamental of Textiles : Susheela Damyanti; Orient Blackswan pvt ltd

2. Textile Science : Gohl, Vilensky; CBS Publishers &Distributers Pvt Ltd

3. Principles of Textile Testing : J E Booth; CBS Publishers &Distributers

4. Technology of Dyeing: V A Shenai

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5. Textile Mechanics : William Scott Taggart; Macmillan and co. Ltd;

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7 Vastra vigyan ki rooprekha Avam siddhant : Vijay Kumar; Baba publications, Jaipur

8 Technology of Printing: V A Shenai

9 Clothing and Textiles Research Journal

10 Journal of textile design, research and practice

11 Textile: the journal of cloth and culture

12 https://www.textilesciences.com

13 htpp://www.cottonworks.com

14 https://www.textileebook.com

Learning Outcome of the Course –

- Students will be able to learn about the different dyes for natural fibres
- Students will also be able to understand the procedure of block printing
- Also the students will learn the process of preparing printing paste
- Students will also understand the different types of fabric finishes being used according to the uses of end product.

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