

**DR. A.P.J. ABDUL KALAM TECHNICAL
UNIVERSITY, LUCKNOW**



EVALUATION SCHEME & SYLLABUS

FOR

B. TECH. SECOND YEAR

Carpet & Textile Technology

AS PER

AICTE MODEL CURRICULUM

[Effective from the Session: 2019-20]

B.Tech. (Carpet & Textile Technology)

Semester III

Sr. No.	Course Code	Course Title	Periods			Evaluation Scheme				End Semester		Total	Credits
			L	T	P	CT	TA	Total	PS	TE	PE		
	KOE031-38/KAS302	Engg. Science Course /Maths IV	3	1	0	30	20	50		100		150	4
1.	KAS301/ KVE301	Technical Communication /Universal Human values	2/ 3	1/ 0	0/ 0	30	20	50		100		150	3
2.	KCT301	Yarn Technology I	3	1	0	30	20	50		100		150	4
3.	KCT302	Fabric Technology I	3	1	0	30	20	50		100		150	4
4.	KCT303	Textile Fibres	3	0	0	30	20	50		100		150	3
6.	KCT351	Yarn Technology I Lab	0	0	2				25		25	50	1
7.	KCT352	Fabric Technology I Lab	0	0	2				25		25	50	1
8.	KCT353	Fibre Identification & Testing Lab	0	0	2				25		25	50	1
9.	KCT354	Mini Project or Internship Assessment	0	0	2			50				50	1
10.	KNC301 /KNC302	Computer System Security/Python Programming	2	0	0	15	10	25		50			0
11.		MOOCs (Essential for Hons. Degree)											
		TOTAL										950	22

*The Mini Project or internship (3-4 weeks) conducted during summer break after II semester and will be assessed during III semester.

Semester IV

Sr. No.	Course Code	Course Title	Periods			Evaluation Scheme				End Semester		Total	Credits
			L	T	P	CT	TA	Total	PS	TE	PE		
1.	KAS402/ KOE041-48	Maths-IV / Engg. Science Course	3	1	0	30	20	50		100		150	4
2.	KVE401/ KAS401	Universal Human Values/Technical Communication	3/ 2	0/ 1	0/ 0	30	20	50		100		150	3
3.	KCT401	Yarn Technology II	3	0	0	30	20	50		100		150	3
4.	KCT402	Fabric Technology II	3	1	0	30	20	50		100		150	4
5.	KCT403	Chemical Processing of Textiles I	3	1	0	30	20	50		100		150	4
6.	KCT451	Yarn Technology II Lab	0	0	2				25		25	50	1
7.	KCT452	Fabric Technology II Lab	0	0	2				25		25	50	1
8.	KCT453	Chemical Processing of Textiles I Lab	0	0	2				25		25	50	1
9.	KNC402/ KNC401	Python Programming/Computer System Security	2	0	0	15	10	25		50			0
10.		MOOCs (Essential for Hons. Degree)											
		TOTAL										900	21

Semester-III

Departmental Course 1: Yarn Technology-I (L T P 3 1 0)
contact hours: 60

Credits= 4, Total

Course Objectives:

1. To describe the classification and introduction to various spinning systems.
2. To describe the ginning process for the extraction of cotton fibre.
3. To describe the opening, cleaning and lap formation process in the blow room line.
4. To describe the chute feed system.
5. To describe Process flow chart and brief idea of process sequences of carded & combed yarn and object of each process.
6. To discuss and describe the drafting systems and drawing process in the drawframe
7. To discuss the superlap formation mechanism, combing process and combing cycle.
8. To discuss production calculations in all machines like blowroom, carding and combing etc.

Unit (1): Ginning, pre-cleaning of cotton. Description and working of roller ginning saw gins, and rotabar ginning, kinds of mixing. Principles of selection of cotton for mixing hand, bin, stack mixing, auto mixer, different cotton varieties advantage and disadvantage of mixing.

Total lectures required = 12

Unit (2): Object of opening and cleaning. Blowroom: Types of openers, beaters, latest openers and beaters, Lap forming mechanism. Chute feed system, production calculation.

Total lectures required = 12

Unit (3): Objects of carding, working principle of carding machine, stripping, Specification of different parts of card & card clothing, Coiling mechanism, card setting, neps/hooks formation, Production, draft and efficiency calculation.

Total lectures required = 12

Unit (4): Objects of drawing, different drafting systems, ideal drafting, and Production monitoring and control, draft and efficiency calculation. Sliver blending on Drawframe. Auto levelers in card and Drawframe.

Total lectures required = 12

Unit (5): Objectives of combing, system of lap preparation, super lap machines, configuration of fibre feed and process sequence in comber with working principle, combing cycle. calculation related to combing machine and production.

Total lectures required = 12

Reference:

1. Man made fibre and their processing by W.Kiein
2. Spinning of man made and blends on cotton systems by K.R.Salhotra
3. Manual of cotton spinning by Frank Fharnley

Course Outcomes:

At the end of the course students will be able to:

1. Apply basics and illustrate the process sequence in ginning and blow room process for cotton yarn manufacturing
2. Describe the chute feed system and carding process for the preparation of sliver.
3. Understand the superlap formation mechanism and combing cycle.
4. Do calculations related to all above process and understand the machine parameters.

Departmental Course 2: FABRIC TECHNOLOGY-I (L-T-P 3-1-0)

Credits = 4 Total contact hours:- 60

Course Objectives:

1. To introduce the weaving process sequence, yarn winding and various winding machines.
2. To develop knowledge on warping process and machines.
3. To get an idea on sizing process and machines.
4. To generate concept on looming in process.
5. To develop knowledge in weave designs.

Unit (1): Introduction to fabric Technology

Fabric structure :

Brief introduction to fabric viz. Woven, knitted and non-woven.

Woven fabric structure: classification based on weave.

Designs, draft and Peg plan for Plain, Twill and their derivatives,

Towelling weaves: diamond, mockleno, huck a back, honey comb;

Weaving preparatory:

Object of various preparatory process.

Sequence of machines for long cloth, poplins and printed dress materials, suiting-shirting fabric checks and stripes, Sari-Dhoti etc.

Total lectures required = 12

Unit (2): Winding

Warp Winding Object, Classification of winding m/c's. Passage of yarn from Rotoconer & Auto-coner-various mechanisms: tensioners, yarn clearers, traverse mechanism. Concept of knotter and splicers, production calculation, package faults.

Weft winding : Object, pirn shape, passage of Hacoba pirn winder- Traverse mech, bunch building mechanism, diameter control, thread stop motion,. Features of automatic pirn winder-. Auto doffing mechanism.

Total lectures required = 12

Unit (3): Warping

Classification of warping m/c, object of each machine

Beam warping-passage, thread stop motion, length measuring device.

Horizontal Sectional warping machines; passage, traverse mechanism and its calculation.

Warping calculation, efficiency and production calculation, beam defect with remedies.

Total lectures required = 12

Unit (4): Sizing

Sizing : Object, sizing ingredients, size preparation,

classification of sizing m/c, working principles and passage of slasher sizing machines-size box and its development, drying mechanism,

Calculation on size concentration, dryer capacity and speed of sizing. Factor affecting size take up,

Size-recipe for cotton, PV, PC warp, sizing defects and remedies.

Total lectures required = 12

Unit (5): Looming in

Drawing in : accessories and tools, manual drawing in process, heald and reed calculation, semi automatic and fully automatic drawing in machines. Beam gaiting process,

Warp Tying in: essential requirement, tying in stand, knotters, warp tying in process.

Warp welding, QSC

Total lectures required = 12

Reference:

1. Industrial practices in weaving preparatory by Mukesh Kumar Singh
2. Yarn preparation Vol. I & II R. Sengupta
3. Warp sizing by Rame Bottom
4. Yarn calculation by R. Sengupta
5. Textile mathematics vol 3 by J E Booth
6. Watson's Textile Design and Colour by Z Grosicki; Universal Publishing Corporation, Bombay (India)
7. Grammer of Textile Design – Nisbet

Course Outcomes:

At the end of the course students will be able to:

1. Describe knowledge in yarn numbering system, weaving process sequence.
2. Illustrate winding process and machineries.
3. Explain warping process and machineries.
4. Depict sizing process parameters for various fabric qualities.
5. Represent looming in process.
6. Explain woven design like plain, twill, satin/sateen etc.

Departmental Course 3: TEXTILE FIBRES (L-T-P 3-0-0) Credits = 3
Total contact hours:- 48

Course Objectives

- To get aware of various terminologies used in processing of textile fibres.
- To acquire knowledge on cultivation, extraction and grading of various natural textile fibres.
- To acquire knowledge on chemistry of various manmade textile fibres.
- To develop an understanding of structure-property relationship among various textile fibres.

UNIT I

Introduction: Various definitions related to textile fibres, classification of textile fibres, essential & desirable properties of textile fibres, advantages & disadvantages of natural and manmade fibres, concepts of molecular weight, degree of polymerization, orientation and crystallinity, characteristics of fibre forming polymer.

Total lectures required = 12

UNIT II

Cotton : Cultivation and harvesting, cotton varieties and grading, morphological structure, physical and chemical properties of cotton fibre and its applications, formation of hydro-cellulose and oxy-cellulose.

Jute cultivation, retting and extraction process, structure of jute fibre, physical and chemical properties of jute fibre and its applications.

Total lectures required = 12

UNIT III

Types of wool and its grading, Morphological structure, chemical composition, physical & chemical properties of wool fibre and its applications,

Types of silk and its production, Silk weighting, degumming of silk, chemical composition and morphological structure of silk, physical & chemical properties of silk and its applications.

Total lectures required = 12

UNIT IV

Chemistry of production of Polyester fibre, Chemistry of production of Nylon 6 and Nylon 66 fibre.

Total lectures required = 12

UNIT V

Chemistry of production of Viscose fibre, Chemistry of production of Poly-Acylonitrile fibre, Chemistry of production of spandex fibre.

Total lectures required = 12

References:

1. WE Morton & JWS Hearle, Physical properties of textile fibres, Textile Institute, U.K.
2. Progress in textiles: Science and technology Vol.-2 by Dr. VK Kothari, IIT Delhi.
3. Hand book of textile fibres by J. Gordon Cook
4. Fibre Science and Technology, S.P. Mishra

Course Outcomes

After completing this course, the student will be able to:

1. Understand various definitions and technical terms used in processing of textile fibres.
2. Understand various essential and desirable properties of textile grade fibres.
3. Understand the morphology of various natural textile fibres.
4. Understand physical and chemical properties of various textile fibres.
5. Understand chemistry of various manmade textile fibres.

Lab 1:- YARN TECHNOLOGY LAB I (L:T:P::0:0:3) Credits = 4

Course objectives

1. To learn mixing and blending of cotton fibres.
2. To study the process of removal of impurities.
3. To learn lap formation mechanism.
4. To study the carding actions.
5. To learn principle of drafting and sliver formation mechanism.

Experiments

1. Mixing and blending of cotton in MBO.
2. Opening, cleaning and lap formation mechanism in the blowroom line.
3. Various parts and sequence of material in the modern blowroom line.
4. Various parts and sequence of material in the carding machine.
5. Various parts and sequence of material in the laboratory drawframe.
6. Determine tension draft, total draft and production in the carding machine.
7. Gearing systems in the drawframe
8. Production calculation in the blow room.
9. Draft calculation in drawframe.

Course Outcomes:

At the end of the course students will be able to:

1. Understand the process of mixing and blending in Mixing Bale Opener.
2. Understand the mixing, cleaning and lap formation mechanism in blow room.
3. Understand the mechanism of sliver formation and different drive systems in the carding machine and blowroom machine.
4. Do calculations related to all above process and understand the machine parameters.

Lab 2:- FABRIC TECHNOLOGY-I LAB Credits = 4

Course objective:

1. To study the supply and delivery pkgs for winding, passage of winding m/c, rotary traverse, thread stop motion, drive and production calculation,
2. To investigation on shuttles and pirns, pirn winder- study of various mechanisms, drive and production calculation
3. To get knowledge on warping m/c-passage, beaming mech. warping calculation
4. To study on manual drawing in process, various types of reed, healds, and drop pins, beam gaiting process
5. To have an idea on passage of warp and weft on plain power loom,
6. To study on drive of loom, speed and production calculation

Syllabus:

1. Fabric analysis; weave, sett, crimp, identification of single and ply yarns and its count, fabric GSM.
2. supply and delivery pkgs for winding, passage of winding m/c, rotary traverse, thread stop motion, drive and production calculation,
3. shuttles and pirns, pirn winder- study of various mechanisms, drive and production calculation
4. warping m/c-passage, beaming mech. warping calculation
5. manual drawing in process, various types of reed, healds, and drop pins, beam gaiting process
6. passage of warp and weft on plain power loom, drive to loom, speed and production calculation

Course outcome:

At the end of the course students will be able to:

1. Explain yarn count and various weave designs.
2. Describe passage of winding m/c, rotary traverse, thread stop motion, drive and production calculation.
3. Give details pirn winder- study of various mechanisms, drive and production calculation.
4. make clear warping m/c-passage, beaming mech. warping calculation
5. Explain manual drawing in process, various types of reed, healds, and drop pins, beam gaiting process
6. Clarify passage of warp and weft on plain power loom, drive to loom, speed and production calculation

Lab 3:- Fibre Identification & Testing Lab (L-T-P 0-0-2) Credits = 1

Course Objectives:

- To get aware of various fibre identification techniques.
- To acquire knowledge on measurement of environmental conditions, moisture content etc.
- To analyze the presence of impurity in raw fibre.
- To develop competency in analyzing a given textile fibre blend.

Syllabus:

1. Analysis of longitudinal and cross-sectional view of common textile fibres like cotton, wool, silk, jute, flax, ramie, viscose rayon, nylon, polyester, acrylic and polypropylene fibre etc. using microscopic methods.
2. Analysis of textile fibers (as mentioned above) by Burning test.
3. Identification of textile fibers (as mentioned above) by Solubility test.
4. Measurement of relative humidity of a given environment.
5. Measurement of standard Moisture regain% and standard Moisture content% of a given textile fibre.
6. Analysis of raw wool fibre impurity.
7. Analysis of medullation percentage in wool fibre sample.
8. Analysis of trash content in given cotton fibre sample.
9. Analysis fibre composition% of a given binary/tertiary blends using chemical solubility methods.

Course Outcomes:

After completing this course the student will be able to:

1. Develop competency in systematically identifying an unknown textile fibre sample.
2. Understand the importance of environmental conditions and its effect on moisture content & other properties of a textile fibre.
3. Calculate the composition of impurity in raw textile fibre.
4. Calculate the composition of blend of givefibres.

Semester IV

Yarn Technology-II (L T P 3 0 0) Credits = 3 Total contact hours:- 60

Course Objectives:

1. To describe the process sequence and mechanism involved in speed frame.
2. To describe the process sequence and mechanism involved in ring frame.
3. To describe the building mechanism in speed frame.
4. To describe the cop formation mechanism in ring frame.
5. To describe the yarn doubling system.
6. To describe the shearing process for the wool and methods of removal of impurities in the wool
7. To discuss and describe the long fibre spinning systems for flax, jute and silk etc.
8. To discuss and describe the breaded yarn mechanism and its application.

Unit 1: Objectives of speed frame, important parts of speed frame and their functioning, Mechanism involved in drafting, twisting, and winding, different types of roller drafting systems, Common defects in roving package, calculations pertaining to gearing, draft, t.p.i. and production, twist multiplier and roving twist

Total lectures required = 12

Unit 2:

Introduction and objective of ring frame, important parts of ring frame and their functions, principle and mechanism involved in drafting, twisting and winding, Spinning Geometry, Types of rings and travelers, mechanism of cop formation, common package size, calculations related to ring frame machine and its production.

Total lectures required = 12

Unit 3:

Doubling - Objects and terminology, study of ring doublers, TFO, Reeling: Objects and terminology, types of reeling construction and working of a reel yarn bundling,

Total lectures required = 12

Unit 4:

Wool-shearing, clipping and grading. Impurities present in wool and their removal, wool scouring and carbonization.

Total lectures required = 12

Unit 5:

Principles & techniques of manufacturing braided yarn, Spinning of Long staple Fibres like Flax, Jute, and Silk etc.

Total lectures required = 12

Text Books & reference Books:

1. Man-made fibre and their processing by W.Kiein
2. Spinning of man-made and blends on cotton systems by K.R.Salhotra
3. Manual of cotton spinning by Frank Fharnley
4. Technology of carding by R.Chattopadhyay

Course Outcomes:

At the end of the course students will be able to:

1. Understand the basics and process sequence in speed frame and in package building for the roving.

2. Understand the basics and fundamentals in yarn doubling m/cs like ring doubler and TFO.
3. Understand the basics and sequence for the formation of yarn in ring frame.
4. To gain knowledge about shearing of wool and impurities present in the wool along with its removal process.
5. To understand the mechanism and process for the formation of breaded yarn and long fibre spinning process.

FABRIC TECHNOLOGY-II (L-T-P 3-1-0) Credits = 4 Total contact hours:- 60

Course Objectives:

1. To know about loom mechanisms.
2. To get an idea on dobby shedding mechanisms
3. To study on jacquard mechanism
4. To get knowledge on picking and beat up mechanism
5. To develop idea on take up and beat up mechanism.
6. To build an idea about auxiliary motion.

UNIT I

Types of shuttle looms; Hand loom and power loom of various types.

Classification of various loom mechanism and their objects,

Passage of the warp and weft on shuttle loom, Shuttle and pirn.

Drive to various parts of Loom and production calculation.

Total lectures required = 12

UNIT II

Types of shed and classification of shedding mechanism.

Tappet shedding: Lift of tappet, drive to tappet shedding. Negative and Positive tappet shedding mechanism. Limitation of tappet shedding

Dobby shedding: Negative and positive dobby, working principle of knife dobby, Rotary cam dobby; Dobby card cutting cross border dobby, electronic dobby.

Total lectures required = 12

UNIT III :

Mechanical jacquard - Classification Figuring capacity, Harness ties, designing and card cutting-lacing

Fundamental jacquards: SLSC, DLSC & DLDC, working principle, drive to various parts, Timing diagram. Brief study of Other fancy jacquard- self twilling, cross border jacquard, Electrical and Electronic Jacquard

Total lectures required = 12

UNIT IV

Mechanism of over pick and under pick motion; drive & timing diagram, Multiple box motion. Warp protector mechanism

Beat up mechanism: Sley beat up mechanism, sley eccentricity and its effect on fabric properties.

Total lectures required = 12

UNIT V:

Take up motion- 5 wheel & seven wheel intermittent take up mechanisms- timing and setting.

Let off- negative, semi positive mechanical and electronic let off mechanisms- timing and setting

Warp stop motion- mechanical & electrical type its setting

Weft stop motion- side and center weft fork motion- its timing and setting.

Selvedge motion and Temples.

Total lectures required=12

Text Books & Recommended Books:-

1. Principles of weaving by Marks & Robinson
2. Weaving mechanism Vol.1 & II by N.N.Banarjee.
3. Weaving calculation by R.Sen Gupta.
4. Weaving Mechanism (Fox).
5. Mechanism/Weaving machine (TALUKDAR)

Course outcome

At the end of the course students will be able to:

1. Describe shuttle loom motions.
2. Depict dobby shedding mechanisms
3. Explain jacquard mechanism

Chemical Processing of Textiles I (L:T:P::3:1:0) Credits = 4

Course Objectives:

9. To describe process sequence in pre-treatments of textile fabrics.
10. To describe singeing and desizing process of various textile fabrics.
11. To discuss and describe scouring mechanism and process of 100% cotton fabrics and its blends.
12. To discuss and describe bleaching mechanism and process of 100% cotton fabrics.
13. To discuss and describe mercerisation mechanism of 100% cotton fabrics.
14. To explain and describe dyeing mechanism and application of direct dyes on cotton.

Unit – I

Preparatory Process: Sequence of preparatory process prior to dyeing for natural & manmade fibre fabrics with special reference to cotton, wool, polyester and blends.

Singeing and Desizing: Objects of desizing, Mechanism of desizing. Inter-relation of desizing with singeing and sizing, Various methods of desizing: Hydrolytic & oxidative method of desizing, Evaluation of efficiency of desizing.

Total lectures required = 12

Unit –II

Scouring: Object of scouring, Scouring with alkali assisted desizing, Inter-relation between desizing and scouring, Study of batch-wise & continuous methods of scouring. Evaluation of efficiency of scouring

Total lectures required = 12

Unit- III

Bleaching: Objects of bleaching, Introduction to bleaching agents like sodium hypochlorite, hydrogen peroxide & per-acetic acid, Bleaching of cotton, polyester & its blends, Batch-wise & continuous machinery for bleaching, Bleaching of wool, silk, Concept of AOX, Evaluation of efficiency of bleaching. Continuous scouring and bleaching: Pre-treatment Range

Total lectures required = 12

Unit -IV

Mercerization: Introduction & objects of mercerization, Effect of mercerization on structure of cellulose, Machinery used for yarn, woven and knit fabrics, Concept of hot mercerization & liquid ammonia mercerization, testing methods to evaluate efficiency of mercerization like Barium Activity, Number, Axial Ratio & Luster index.

Total lectures required = 12

UNIT – V

Direct Dyes: Generalised formula of Direct dyes: Classification of direct dyes; Mechanism of Direct dyes and procedure for application of direct dyes; dye-fibre bond; effect of different

process parameters (e.g. temp, time, pH) & role of various additives in dyeing process; fastness properties of direct dyes; after treatments for direct dyes.

Total lectures required = 12

References:

1. Dyeing & Chemical technology of Textile fibres by E.R. Trotman.
2. Chemical Technology in the Pre-Treatment process of Textile by Dr S. R. Karmakar.
3. Technology of Bleaching Vol. IV, by Dr. V.A. Shenai.
4. Technology of Bleaching by J.T Marsh
5. Chemistry of Dyes and principles of Dyeing by Dr. V.A. Shenai.
6. Technology of Dyeing by Dr. V.A. Shenai

Course Outcomes:

At the end of the course students will be able to:

5. Apply basics and illustrate the process sequence in pre-treatment operations of fabrics
6. Describe the singeing and desizing process of textile fabrics.
7. Apply and illustrate scouring process of cotton and other textile fabrics.
8. Set up mercerization process and control the process.
9. Summarize and illustrate the application of direct dyes on cotton

Course objectives

1. To learn the mechanism and function of speed frame.
2. To study the calculations related to draft, total draft, draft distribution and production in speedframe.
3. To learn package building mechanism.
4. To study the drafting systems and cop formation mechanism, twisting and formation of yarn in ring frame.

Experiments:

- Study different parts & stop motions of LF 1400A speed frame, their function, gearing diagram and speed calculation,
- Calculation of draft constant, total draft & draft distribution in LF 1400A speed frame.
- study the builder motion, calculate the twist per inch of a roving from the gearing diagram, production in Kg/Shift for a given roving hank. machine parameters
- Study different parts -drafting system
- Determination of shore hardness of cots, bottom roller eccentricity, top arm pressure of a Ring Frame and speed frame.
- Determination of twist constant of a Ring frame and to find twist per inch in yarn, draft constant, Break draft constant and distribution of draft.
- calculate the production in Kg/Shift for a given yarn count.
- bobbin building mechanism of a ring frame.

Course Outcomes:

At the end of the course students will be able to:

1. Understand the process of drafting and roving formation in Speed frame.
2. Understand the building mechanism in speedframe.
3. Understand the mechanism of drafting and sliver formation and different drive systems in the ring frame machine.
4. Do calculations related to all above process and understand the machine parameters.

NOTE:

Experiments shall be decided on factors like:

- Facilities installed at Institute.
 - Accessibility to Industry & nearby Institutes.
 - Trend of Technological Developments in National & International perspective
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Course objective

1. To study on tappet shedding.
2. To Study on overpick and underpick mechanism.
3. To study on sley beat up mechanism.
4. To Study on loose and fast reed warp protector motion.
5. To study on take up mechanism.
6. To study on warp stop motion.
7. To study the let off mechanism.
8. To study the doobby mechanism.
9. To study on jacquard mechanism.

Syllabus

1. Tappet shedding.
2. Picking motion- over pick motion, under pick motion.
3. Sley beat up mech, calculation of sley eccentricity.
4. Loose and fast reed warp protector motion.
5. Warp Take up motion .
6. Warp let-off mech.
7. Climax doobby and its card preparation
8. Cam doobby and its card preparation.
9. Warp stop motion and setting, timing diagram.
10. Working principle of double lift double cylinder jacquard.

Course outcome

At the end of the course students will be able to:

1. Explain primary, secondary and auxiliary motions of loom.
2. Depict the working principle of cam doobby and climax doobby.
3. Explain double lift double cylinder jacquard mechanism.

Course objectives

15. To learn desizing of textiles.
16. To determine various impurities present in textile fabrics.
17. To learn scouring and bleaching of textiles.
18. To learn dyeing with direct dyes.

Experiments

10. Desizing of cotton fabric using various types of desizing agents.
11. Scouring of natural fibres viz. cotton in form of yarn or fabric and find the scouring loss.
12. Scouring of wool fibre.
13. Degumming of silk and calculation of weight loss percentage.
14. Bleaching of cotton by sodium Hypochlorite.
15. Determination of available chlorine of sodium hypochlorite.
16. Bleaching of cotton by sodium Chlorite.
17. Bleaching of cotton by hydrogen peroxide.
18. Bleaching of silk by sodium hydrosulphite.
19. Dyeing of Cotton with Direct Dyes.

Course outcomes

At the end of the course students will be able to:

10. Desize fabrics and set up the process.
11. Scour fabrics and apply the same in industry.
12. Bleach textiles and apply the same in bulk production.
13. Apply direct dyes in textiles.