Faculty of Engineering & Technology
P.K.University
Shivpuri (MP)

Department of Textile Technology

Evaluation Scheme & Syllabus

B.Tech. Textile Technology

Third Year

(V & VI SEM)

(Effective from session 2025-26)

Study And Evaluation Scheme For B.Tech. Textile Technology

Year- 3rd /Semester -5th

Subject Code	Subjects Name	Study Scheme Periods/Week			Credits	Marks in Evaluation Scheme						Total Marks of Internal & External
						Internal Assessment			External Assessment			
		L	T	P		Th	Pr	Total Internal	Th	Pr	Total External	Grand Total
UMANATT501	Managerial Economics	4	0	0	4	30	-	30	70	-	70	100
UTEXTTT502	Textile Testing-I	3	0	0	3	30	-	30	70	-	70	100
UCHEMTT503	Chemistry & Production of Fibers	3	0	0	3	30	-	30	70	-	70	100
UYARNTT504	Yarn Manufacture-III	3	0	0	3	30	-	30	70	-	70	100
UFABRTT505	Fabric Manufacture-III	3	0	0	3	30	-	30	70	-	70	100
UFABRTT506	Fabric Structure and Analysis	3	0	0	3	30	-	30	70	-	70	100
UTEXTTT507	Textile Testing-I Lab	0	0	2	1	-	25	25	-	25	25	50
UYARNTT508	Yarn Manufacture-III Lab	0	0	2	1	-	25	25	-	25	25	50
UFABRTT509	Fabric Structure and Analysis Lab	0	0	2	1	-	25	25	-	25	25	50
UFABRTT510	Fabric Manufacture-III Lab	0	0	2	1	-	25	25	-	25	25	50
Total		19	0	6	23	180	100	280	420	100	520	800
For pass the candidate is required to obtain 40% marks in each paper and 50% marks in aggregate.												400

STUDY AND EVALUATION SCHEME FOR B.TECH IN TEXTILE TECHNOLOGY

YEAR 3RD / SEMESTER -6TH

SUBJECT CODE	SUBJECTSNAME	STUDYS CHEME Periods/Week			Credits	MARKSINEVALUATIONSCHEME						Total Marks of Internal & External
						INTERNALASSESSMENT			EXTERNALASSESSMENT			
		L	T	P		Th	Pr	Tot	Th	Pr	Tot	
UINDETT601	Industrial management	3	0	0	3	30	-	30	70	-	70	100
UCOATTT602	Coating of Textiles	3	1	0	4	30	-	30	70	-	70	100
UTEXTTT603	Textile Testing-II	3	0	0	3	30	-	30	70	-	70	100
USTRUTT604	Structure & Properties of Fibers	3	1	0	4	30	-	30	70	-	70	100
UYARNTT605	Yarn Manufacture-IV	3	0	0	3	30	-	30	70	-	70	100
UFEBRTT606	Fabric Manufacture-IV	3	0	0	3	30	-	30	70	-	70	100
UTEXTTT607	Textile Testing-II LAB	0	0	2	1	-	25	25	-	25	25	50
UYARNTT608	Yarn Manufacture-IV	0	0	2	1	-	25	25	-	25	25	50
UFEBRTT609	Fabric Manufacture-IV	0	0	2	1	-	25	25	-	25	25	50
Total		18	2	6	23	180	75	255	420	75	495	750

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Semester-V

L	T	P
4	0	0

UMANATT501: MANAGERIAL ECONOMICS

UNIT -I

Introduction of Engineering Economics and Demand Analysis: Meaning and nature of Economics, Relation between science, engineering, technology and economics; Meaning of Demand, Determinants of Demand, Shifts in demand, Law of Demand, Price Elasticity of Demand &Types, Income Elasticity, Cross price Elasticity, Determinants of Elasticity, uses andImportance of elasticity.

UNIT -II

Concept of Supply: Law of Supply, Factors affecting Supply, Elasticity of supply.
Demand Forecasting: Introduction, Meaning and Forecasting, Methods or Techniques of Demand Forecasting, Criteria for Good Demand Forecasting, Demand Forecasting for a New Product;

UNIT- III

Cost Analysis- Introduction, Types of Costs, Cost-Output Relationship: Cost Function, Cost-Output Relationships in the Short Run, and Cost-Output Relationships in the Long Run; Short run and long run, Break- Even Analysis; Production functions: laws of variable proportions, law of returns; Economies of scale: Internal and external**.**

UNIT- IV

Market Structure: Market Structure Perfect Competition, Imperfect competition – Monopolistic, Oligopoly, duopoly sorbent features of price determination and various market conditions.

UNIT- V

Nature and characteristics of Indian economy, concepts of LPG, elementary concepts of National Income, Inflation and Business Cycles ,Concept of N.I. and Measurement., Meaning of Inflation, Types and causes , Phases of business cycle .Investment decisions for boosting economy(National income and per capital income)

TEXT BOOKS-

1. Premvir Kapoor, Sociology and Economics for Engineers, Khanna Publishing House (Edition 2018)
2. Salvatore D, ―Principles of Microeconomics‖, Oxford University Press.
3. Koutsoyiannis A, ―Modern Microeconomic‖, Macmillan Education Ltd.
4. Dwivedi DN, ―Principles of Microeconomics‖, Pearson Education.
5. Cowell, FA, ―Microeconomic Principles and Analysis‖, Oxford

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Semester-V

UTEXTTT502: TEXTILE TESTING-I

L	T	P
3	0	0

Unit (1): Introduction of textile testing (1), sampling, random sampling, biased sampling (1), sampling techniques, square, cut square, zoning technique (1), selection of sample for testing, grading of cotton fibre with respect to staple length (1), laboratory measurement of fibre length, span length, Baer sorter (1), Shirley photo electric staple, servo fibro graph (1), salient features of HVI(1).
Total Lectures Required = 7

Unit (2): Atmospheric conditions for testing, absolute & relative humidity, moisture regain & moisture contest (1), importance of moisture in textiles, measurement of moisture regain & content (1), effect of moisture on properties (physical & mechanical) of textile material, factors affecting the regain (2), correct numerical weight, oven dry weight (1), shrilly moisture meter(1).
Total Lectures Required = 6

Unit (3): Dry and wet bulb hygrometer, sling assmann, hair hygrometers (2), control of testing room atmosphere (1), AFIS (1), Napping potential (1), Nep count (1), rating of neps, maturity coefficient measurement by NaOH method, fibre fineness by airflow meter & Sheffield micronaire(2).
Total Lectures Required = 9

Unit (4): Fibre bundle strength by Pressley, stelometer (2), fibre quality index, linear density of man made fibres and strength (1), spin finish, crimp (1), Trash, Shirley trash analyzer (1). Yarn numbering system (1), wrapping test for lap, sliver, roving (1),
Total Lectures Required = 7

Unit (5): determination of yarn count, diameter (1), average & resultant count of folded yarn, relation between Ne, D, T, Nm (1). Instruments used for determination of count, quadrant balance, Knowles balance, bees lay balance and physical balance (2), Twist, classification of twist, twist measurement, direct counting method, continuous twist tester, twist-untwist method, (2), Twist tester, (2), R.B. twist tester, level of twist(1).
Total Lectures Required = 9
Grand total of lectures required = 36

Reference Books: -

1. Quality control and testing management by Dr. V.K.Kothari
2. Principle of textile testing by J.E.Booth
3. Physical testing of textiles by B.P.Savile.

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Semester-V

L	T	P
3	0	0

UCHEMTT503: CHEMISTRY AND PRODUCTION OF FIBERS

Unit (1): Polyethylene Terephthalate Fibre – History of development, Polymer production by DMT & PTA route, Chips drying, Fibre manufacturing, Effect of process variable on properties of polyester fibre, some dope additives for specialty polyester fibre, Properties of polyester fibre.
Total Lectures required = 08

Unit (2): Polyamide Fibres – History of development, Different types of polyamide fibres, Nylon polymer production by continuous polymerization in VK Tube, Manufacturing of Nylon 6 fibre by melt spinning, Properties of nylon 6 fibre, Polymer production of Nylon 66, Nylon 66- fibre formation by melt spinning, Properties of Nylon 66 fibre, Brief introduction to Aramidfibres.
Total Lectures required =08

Unit (3): Introduction of polyolefin fibres, Polymerization of polyethylene, Polyethylene (PE) fibre formation, Properties of polyethylene fibre, Different type of polypropylene (PP), Polymerization of polypropylene, Polypropylene fibre formation, Properties of polypropylene fibre.
Total Lectures required =08

Unit (4): Introduction of vinyl fibres, Polyacrylonitrile (PAN) fibre, Use of ionic and neutral co-monomers, Polymerization of PAN, Acrylic fibre- formation by dry spinning, Dry –jet-wet spinning process, Effect of process variables on properties of PAN fibre, Dope formation, Properties of PAN fibre, Introduction to polyurethane fibre.
Total Lectures required = 08

Unit (5): Introduction of regenerated fibre, Concepts of regeneration of fibre, Raw material for viscose rayon, Manufacturing sequence of viscose fibre, Steeping and pressing, Cutting and shredding, Ageing, Xanthation of sodium cellulose, Mixing and filtration, Ripening, Wet spinning of viscose rayon, Formation of serrated edge cross-section of viscose rayon, Viscose fibre properties, Introduction of cuprammonium rayon in brief, Introduction of cellulose acetate rayon in brief, Introduction of lyocell fibre in brief.
Total Lectures required =08
Grand total lectures required = 40
Books:

1. Manufactured fibre technology by V.B. Gupta & V.K.Kothari
2. Essential fibre chemistry by M.E.Cartor
3. Synthetic fibres by Fourne

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Semester-V

L	T	P
3	0	0

UYARNTT-504: YARN MANUFACTURE – III

Unit (1): Object of combing (1), system of lap preparation and study of their lap, ribbon-lap and super-lap machine (3), configuration of fibers feed and its effect on the quality of product, n oil percentage and fraction efficiency of comber (3).
Total Lecturers Required =7

Unit (2): Type of combers (2), distinguishing frameless of Hillman and Nasmith combers (3), detailed study of the Nasmith type comber (2), timing and setting of Nasmith comber for different classes of cotton (1), control of comber work (1), calculation pertaining to draft, production and noil percentage (1), recent developments in combing (1).
Total Lecturers Required =11

Unit (3): Objects of speed frame (1), conventional and modern roving processes (1), mechanism involved in drafting, twisting and winding (2), basic principle of designing of cone drum (2), differential motions and their working principles (2).
Total Lecturers Required =8
Unit (4): Builder motions their objects & types (1), working principles of any modern builder motion (1), drafting system (ordinary & high) (1), processing parameters for different hank roving (1).
Total Lecturers Required =4

Unit (5): Common defects in roving package their censes and remedies (2), calculations pertaining to gearing, contents, draft, TPI and production (2), twist multiplier and roving twist (1).
Total Lecturers Required =5
Grand Total of lectures required =35

Reference Book: -

4. Spun yarn technology Vol. I – A.Ventaksubramani
5. Elements of combing – Dr. A.R.Khare
6. A practical guide to combing & drawing – W.Klein
7. Cotton Spinning - Taggart
8. Spun Yarn Technology –Oxtoby.

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Semester-V

L	T	P
3	0	0

UFABRTT505: FABRIC MANUFACTURE-III

Unit (1): General description of plain power looms (2), their mechanical details (2), tuning and adjustment (1). Classification of fabric and weaving machinery (2), introduction to weaving process, primary, secondary and auxiliary (2) motion of looms
Total Lectures Required = 9

Unit (2): Various ways of shedding (1), various types of sheds(1), over and under pick motion(1), beat up motion(1), tappet shedding,(1), idea of construction of tappet(1), underandoverpickmechanismslay(1),beatingupmotion(1),earlyandlateshedding,temples and its utility, idea about heads count and reed count in different system(1), terry mechanism(1)
Total Lectures Required =9

Unit (3): Negative and positive take up motion (1), negative and positive let-offmotions (1), causes of shuttle flying and shuttle trapping (2), merits and demerits of negative of negative and positive take up and let of motion (2), 5 and 7 wheel take up motion. (2)
Total Lectures Required =8

Unit (4): Warp protecting motion (1), side and center weft fork motion (1), negative and positive dobby (1), cross border dobby. Preparation of lattice, Development in dobby. Scope and limitations dobby (1), brief description of Cromption dobby, Knowles dobby (1), paper dobby (1), cross border dobby (1), pegging plan dobby faults and adjustment (1) Numerical problems on loom speed, production & efficiency (1).
Total Lectures Required = 9

Grand Total of lectures required = 35
Reference Books: -

1. Weaving mechanism byFox.
2. Weaving mechanism by N.N.Bannerjee.
3. Weaving Calculation by R.Sengupta.
4. Weaving machine & mechanism byTalukdar.

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Semester-V

L	T	P
3	0	0

UFABRTT506: FABRIC STRUCTURE AND ANALYSIS

Unit (1): Classification of various fabrics (1), construction of plain weave and its derivatives (2), ordinary twill right hand twill (1), warp faced, weft faced & balanced twills (2), Satin regular, irregular and their extension (1).
Total Lectures Required = 7

Unit (2): combined twills, end to end and pick-to-pick combination (1). Fancy twills-large diagonal shaded twills (1), sateen base diagonals and brained twills (1), elongated twill-steep and low twills (1), pointed, wave zig-zag, curved, broken, herring borne, transposed, corks screw twills (2), Diamond, mock leno, ordinary honeycomb, brighten honeycomb (2),
Total Lectures Required = 8

Unit (3): Huck-a-back and crepe weave (), derivatives of hopsack barley corn stitched hopsack and twilled hopsack (2), Simple and wadded bed ford cords (1), weft and piques (1), principle of figuring with extra material extra warp figuring (2) extra weft, limitation of extra thread (2).
Total Lectures Required = 9

Unit (4): Backed cloths (1), weft backed cloths, warp backed cloths with weeding threads (2), double cloths, center stitched, self stitched (2), inter changing double cloth, cut effect in interchanging double cloths (2).
Total Lectures Required = 7

Grand Total of lectures required = 31

Reference Book: -

1. W. Watson Textile Design & colour Longmans Greens Co.London.
2. Z.J Grosicki Watson's Textile design and colour Newnes Buter Worth,London.
3. Z.J. Grosicki, Advance Textile Design Newnes Butter Worth,London.
4. ―Nishant‖ A Grammar oftextile.

UTEXTTT507:TEXTILE TESTING-I LAB

L	T	P
0	0	2

List of Experiments

1. Study of Zoning technique for selection of fibre sample.
2. Fibre Length by using Grease Plate Method.
3. Comb Sorter method for estimation of fibre length parameters.
4. Fibre Fineness by Cut-Weight Method.
5. Measurement of fibre fineness by airflow principle.
6. Fibre Maturity Measurement by Caustic Soda Method
7. Determination of trash content in cotton using Trash Analyzer.
8. Study of fibre parameters on AFIS.
9. Study of fibre parameters on HVI.
10. Determination of Neps in Card web by Shirley Template.
11. Determination of moisture content and regain by oven dry method.
12. Determination of moisture content by Shirley Moisture meter

UYARNTT508: YARN MANUFACTURING-III LAB

L	T	P
0	0	2

Practice in handling operation, setting and gauging of lap former, comber and speed-frame, Study of constructional details of machines: various controls and change places etc., Practice in checking the quality of sliver, roving, comber lap and waste analysis, common fault and remedies, Calculation pertaining to gearing, speeds, constant, draft and production etc.

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UFABRTT509: FABRIC STRUCTURE & ANALYSIS LAB

L	T	P
0	0	2

Analysis of various types of fabric structures like plain, twill, satin, hopsack, barleycorn etc,

UFABRTT-510: FABRIC MANUFACTURE –III LAB

L	T	P
0	0	2

1. Semi positive let-off, its calculation, settings
2. Cam dobby working principle, timing and setting
3. Drop box mech , card preparation
4. Jacquard mech, drive, setting and timing, card preparation.
5. Weft passage of shuttle less loom
6. Automatic cop change mechanism
7. Practice of loom turning, snap study in weave room

NOTE: Experiments shall be decided on factors like:

1. Facilities installed at Institute.
2. Accessibility to Industry & nearby Institutes.
3. Trend of Technological Developments in National & International perspective

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Semester-VI

L	T	P
3	0	0

UINDUTT601: INDUSTRIAL MANAGEMENT

Unit-I

Introduction: Concept, Development, application and scope of Industrial Management.
Productivity: Definition, measurement, productivity index, types of production system, Industrial Ownership.

Unit-II

Management Function: Functions of Management, Taylor's Scientific Management Theory, Fayol's Principles of Management, Social responsibilities of Management, Introduction to Human resources management: Nature of HRM, functions and importance of HRM.

Unit-III

Work Study: Introduction, definition, objectives, steps in work study, Method study: definition, objectives, and steps of method study, Work Measurement: purpose, types of study — stop watch methods — steps — allowances — standard time calculations — work sampling, Production Planning and Control
Inventory Control: Inventory, Cost, Deterministic Models, and Introduction to supply chain management.

Unit-IV

Quality Control: Process control, SQC, Control charts, Single, Double and Sequential Sampling, Introduction to TQM.

Unit-V

Project Management: Project network analysis, CPM, PERT and Project crashing and resource Leveling

1. BOOKS AND REFERENCE:

1. Statistical Quality Control by Grant and Leavarworth, McGraw Hill
2. Industrial Management By O P Khan.
3. Problems in Operations Research by- Prem Kumar Gupta & D.S. Hira, S. Chand

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Semester-VI

UCOATTT602: COATING OF TEXTILES

L	T	P
3	1	0

Unit-1: Polymeric materials for coating- (Rubbers: natural and synthetic, (3)(Polyvinyl chloride, Polyurethane, Acrylic polymers, Adhesive treatment (4)
Total lecture required=7

Unit-2: Coating Methods: Knife coating (1), Roll coating (1) transfer coating (1), Rotary screen printing (2) calendaring hot melt coating (2)
Total lecture required=7

Unit-3: Physical properties of coated fabric (2) Rheology of coating (1), Rheological Behaviors of fluids (2) pastes (1) hydrodynamic analysis of coating (2)
Total lecture required=8

Unit-4: Fabric for foul weather protection- Clothing comfort (1) Impermeable coating (1) breathable fabric (1) Non Apparel coating (1), Fabrics for Chemical protection (1) Thermo chromic Fabric (1) Temperature Adaptable Fabrics (1) Camouflage nets (1) Metal and conducting polymer-coated fabrics (2) Radiation cured coating(1)
Total lecture required=8

Unit-5: Test methods, Coating per Unit area, Degree of fusion/curing of coating (1) blocking Abrasion resistance (1) Test for colour- Fastness to dry and wet rubbing, Resistance to water penetration (3) Air permeability (1) water vapour permeability (1) low temperature bend test (1) low temperature impact test (1)
Total lecture required=9
Grand Total lecture required=39
Reference Books:

1. Coating & Laminated Textiles by WaterFung
2. Coated Textile by A.K. Sen
3. Coated Fabric technology Vol 1-3 Technomicpublication
4. Coated & laminated Fabric by AATCCsymposium

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Semester-VI

UTEXTTT603: TEXTILE TESTING-II

L	T	P
3	0	0

Unit (1): Textile properties of yarn and fabric(2), stress-strain curve(1), various methods for finding of yield point(1), methods for finding of various modulus(1), destination of tenacity(1), stiffness of fabric(1).
Total Lectures Required = 7

Unit (2): Yarn testing m/cs- single yarn strength tester, lea strength tester (2), fabric strength tester- impact tester, Graph test, fabric B.S. Test (3), Scott serigraph, Instron testing m/c (2).
Total Lectures Required = 7

Unit (3): Fabric abrasion & resistance to wear (1), Bursting strength test (1), Tear test, Wear (1), Brief introduction of FAST & KAWABATA (1), estimation of fabric thickness, rigidity, air permeability (1), water repellency (1), drape handling (1), crimp, thermal transmission properties (1).
Total Lectures Required = 8

Unit (4): Cover factor of fabric (1), snagging-mace snagging test (1), weaver trials, advantages and disadvantages of weaver trial (1), lab test (1), measurement of lap, sliver, yarn irregularity (1) salient features of Uster evenness tester (2)
Total Lectures Required = 7
Grand Total of lectures required = 29

Reference Books: -

1. Physical testing of textiles by B.P.Saville.
2. Quality control and testing management by Dr. V.K.Kothari.
3. Principles of textile testing by J.E.Booth.
4. Quality control by V.K.Kothari.

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L	T	P
3	1	0

USTRUTT604: STRUCTURE AND PROPERTIES OF FIBRES

Unit (1): Moisture absorption, heat of absorption (2), differential heat of absorption, integral heat of absorption (2), Quantitative theory of heat moisture absorption (2), Rate of moisture absorption(1)
Total Lectures Required = 7

Unit (2): Mechanical properties of fibres (2), Relation between structure and mechanical properties of fibres (2), Basic mechanical properties (tenacity elongation, modulus, work of rupture (2), Elastic recovery, time effects (2).
Total Lectures Required = 8

Unit (3): Thermal behavior of textile fibres by DSC (2), TGA, thermal mechanical analysis (2), Density gradient column (2), Preparation of density gradient coloumn (2).
Total Lectures Required = 8

Unit (4): Birefringence behavior, dielectric properties (2), fibre friction, fibre friction measurement (2), fibre yarn to surface friction measurement and static charge measurement (5)
Total Lectures Required = 7

Unit (5): Creep behavior (2), Optical properties of fibres (2), concept of moisture absorption by fibres (2), relation between fibre structure and fibre properties (2).
Total Lectures Required = 8
Grand Total of lectures required = 38

Reference Book: -

5. Manufactured fibre technology by V.B. Gupta, V.K.Kothari
6. Physical properties of fibre by J.W.S.Hearle
7. Thermal behavior of material byTuri
8. Modern yarn production by Ray
9. Textile fibres by ATIRA
10. ASTM Standard books
11. Absorbereychartering
12. Polymers by fibre & textilesencyclopedia
13. Advances in fibre source by S.K.Mukhopadhyaya

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UYARNTT605: YARN MANUFACTURE– IV

L	T	P
3	0	0

Unit (1): Principle and mechanism involved in drafting, twisting & winding (2), ordinary and high draft system (2), yarn twist: Terminology, twist level, concept of twist multiplier (1), propagation of twist (2),
Total Lecturers Required = 7

Unit (2): Builder motion (2), common package size, limitations to large package spinning (2), types of rings and travelers and their common uses (2), Rising and falling lappets, control rings, apron drafting system (2)
Total Lecturers Required = 8

Unit (3): System of waste collection of ring frame and types of spinning wastes (2), limitation in ring spinning and factors responsible for loss in efficiency (1), yarn faults and their remedies (2), Recent developments in ring spinning (1).
Total Lecturers Required = 7

Unit (4): Doubling: - Objects and terminology (1), study of ring doublers (1), fancy yarns (1), sewing thread and tyre Cord (1). Reeling: Objects and terminology, types of reeling construction and working of a reel (2), yarn bundling (1), calculation of draft, TPI and production of ring frame & doubling frame (2),
Total Lecturers Required = 9
Grand Total of lectures required =31

Reference Books: -

14. Elements of ring frame & doubling – Dr. A.R.Khare
15. The technology of short-shape staple spinning – W.Klein
16. Cotton spinning – Taggart
17. Spun yarn technology –Oxtoby

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Semester-VI

L	T	P
3	0	0

UFABRTT606: FABRIC MANUFACTURE-IV

Unit (1): Jacquards shedding (1), types of jacquards and their principle of working (2), cross border jacquards (2). Harness mounting London and Norwich system (1), Card cutting (1), limitations of jacquards, Jacquards-driving study of following jacquard. (4), (a). Single lift single cylinder
(b). Double lift single cylinder (c). Double lift double cylinder (d). Electronic jacquard.
Total Lectures Required = 11

Unit (2): Different systems of harness tieing. (2), terry mechanism (2), Recent development in jacquards (2)

Total Lectures Required = 6

Unit (3): Automatic looms – pirn (2), shuttle changing (2), Detailed study of various motions of automatic looms (2), cop changing loom (1), warp stop motions mechanical (1), electro-mechanical, electronic stop motion (1).
Total Lectures Required = 9

Unit (4): Multiple box motion, their types (2), principle of working of multiple box motion (1), two colours and four-colour drop box motion (1), brief description of pick-at will (1), pick and pick motion. On line process and quality control (1), estimation of productivity, snap study. (7)
Total Lectures Required = 7

Unit (5): Numerical problems concerning to above (5)
Total Lectures Required = 05
Grand Total of lectures required = 38

Reference Books: -

1. Weaving mechanism byFox.
2. Weaving mechanism by N.N.Bannergy.
3. Weaving Calculation by R.Sengupta.
4. Weaving machine & mechanism byTalukdar

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UTEXTTT607: TEXTILE TESTING-II LAB

L	T	P
0	0	2

Use of microscope for testing of yarns for appearance, twist and diameter, measurement of evenness, measurement of yarn strength, tenacity, elongation at break, modulus, crimp rigidity, fabric testing for dimension, weight, thickness, shrinkage and air permeability, Fabric testing for elongation, tensile, bursting, and tearing strength, abrasion resistance, glexural rigidity, crease recovery and draping qualities of fabric

UYARNTT608: YARN MANUFACTURE-IV LAB

L	T	P
3	0	0

Operating, setting and gauging of ring frame and doubling frame, study of constructional details of machinery, various controls, change places etc., Practice in checking the quality of single and double yarn, common yarn faults and their remedies, calculations pertainingto gearing, speeds, constant, draft, TPI and production in ring frame and doubling frame.

UFABRTT609: FABRIC MANUFACTURE-IV LAB

L	T	P
3	0	0

Construction, names of parts, setting of automatic pirn change, drop box motions, and shuttle box, Names of parts, setting and fitting of warp protecting, warp and weft stop motions.