

Hemchandracharya North Gujarat University, Patan

Community College

Programme on
Textile and Ginning Technology

Offered at

Pramukh Swami Science and H.D. Patel Arts College

Sarva Vidyalaya Campus, Kadi

Preface

The University Grants Commission (UGC) has launched a scheme on skills development based higher education as part of college/university education, leading to setting up of Community College (C.C.) to serve multiple needs, including (i) career oriented education and skills to students interested in directly entering the workforce; (ii) contracted training and education programmers for local employers; (iii) high-touch remedial education for secondary school graduates not ready to enroll in traditional colleges, giving them a path to transfer to three or four year institutions; and (iv) general interest courses to the community for personal development and interest. Community College will have with multiple exits such as Diploma/Advanced Diploma under the NSQF(National Skills Qualifications Framework).

The Community College model, by and large, will be accessible to a large number of individuals of the community, offer low cost and high quality education locally, that encompasses both vocational skills development as well as traditional coursework, thereby providing opportunities to the learners to move directly to the employment sector or move into the higher education sector. It offers a flexible and open education system which also caters to community-based life-long learning needs. It has a synergistic relationship between the community, community college and the job market.

About the programme

Cotton is a crop that exerts considerable influence on India's economy. Besides securing livelihood for over 60 million people engaged in various vocations related to farming, trade and textile industry. The ginning industry separates cotton fibres from seeds. The ginning process is the most important mechanical treatment that cotton undergoes before it is converted into yarns and fabrics. Any damage caused to the quality of fibres during ginning cannot be rectified later in the spinning or subsequent processes and milling.

This course is based on Ginning and Spinning Technologies. By introducing this course skilled persons are produces whom can work in the cotton and spinning industries with high efficiency and productivity.

I=INTERNAL EXAM, E=EXTERNAL EXAM,

ESE=END SEMESTER EXAM, PA=PROGRESSIVE ASSESMENT

SEMESTER - I

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT101	COMUNICATION SKILL	2	-	2	40	60	--	--	100
TGT102	ENGINEERING WORK SHOP PRACTICE (MECHANICAL)	-	8	8	--	--	80	120	200
TGT103	SEED COTTON PROCESSING	4	-	4	40	60	--	--	100
TGT104	OPERATION OF SPINNING MACHINES	-	8	8	--	--	80	120	200
TGT105	SPINNING MACHINERY 1	2	2	4	30	50	40	80	200
TGT106	SPINNING PROCESS 1	2	2	4	30	50	40	80	200
TOTAL				30	170	270	200	360	1000

SEMESTER - II

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT201	COMPUTER APPLICATION-1	-	2	2	--	--	40	60	100
TGT202	ENGINEERING WORK SHOP PRACTICE (ELECTRICAL)	4	4	8	40	60	80	120	300
TGT203	GINNING TECHNOLOGY 1	4	-	4	40	60	--	--	100
TGT204	SPINNING PROCESS 2	4	-	4	40	60	--	--	100
TGT205	GINNING PRACTICE	-	6	6	--	--	80	120	200
TGT206	SPINNING PRACTICE	-	6	6	--	--	80	120	200
TOTAL				30	120	180	280	420	1000

SEMESTER - III

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT301	COTTON QUALITY AND ITS TESTING	6	-	6	40	60	--	--	100
TGT302	HUMAN RESOURCE MANAGEMENT	2	-	2	40	60	--	--	100
TGT303	GINNING TECHNOLOGY 2	2	2	4	30	50	40	80	200
TGT304	SPINNING MACHINERY 2	2	2	4	30	50	40	80	200
TGT305	COTTON TESTING PRACTICE	-	12	12	--	--	120	180	300
TGT306	COMPUTER APPLICATION-2	-	2	2	--	--	40	60	100
TOTAL				30	140	220	240	400	1000

SEMESTER - IV

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT401	MACHINERY MAINTENANCE	0	6	6	--	--	80	120	200
TGT402	MODERN SPINNING TECHNOLOGY	4	2	6	30	50	40	80	200
TGT403	YARN QUALITY PARAMETERS AND THEIR TESTING	4	2	6	30	50	40	80	200
TGT404	PROCESS CONTROL AT SPINNING	2	4	6	30	50	40	80	200
TGT405	PROCESS CONTROL AT GINNING	2	4	6	30	50	40	80	200
TOTAL				30	150	250	200	400	1000

C.C. TEXTILE AND GINNING TECHNOLOGY

SEMESTER – III

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT301	COTTON QUALITY AND ITS TESTING	6	-	6	40	60	--	--	100
TGT302	HUMAN RESOURCE MANAGEMENT	2	-	2	40	60	--	--	100
TGT303	GINNING TECHNOLOGY 2	2	2	4	30	50	40	80	200
TGT304	SPINNING MACHINERY 2	2	2	4	30	50	40	80	200
TGT305	COTTON TESTING PRACTICE	-	12	12	--	--	120	180	300
TGT306	COMPUTER APPLICATION-2	-	2	2	--	--	40	60	100
	TOTAL			30	140	220	240	400	1000

TGT301:COTTON QUALITY AND ITS TESTING

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 30 marks and external Examination conducted by University examixnation for 50 marks.Students are evaluated on the basis ESE for 40 marks and PA for 80 marks for practical examination

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT301	COTTON QUALITY AND ITS TESTING	6	--	6	40	60	--	--	100

Theory:

Topic 1: Quality Parameters of Cotton

- 1.1 Need of cotton quality
- 1.2 Types of cotton on basis of its quality
- 1.3 Length, thickness, strength of cotton fibers and presence of trash

Topic 2: Fiber Length/ Strength/ Fineness and trash of Cotton

- 2.1 Importance of Characteristics of fibers to prepare count of yarn
- 2.1 Testing systems to measure different properties of fibers
- 2.2 Parameters of fiber length and trash
- 2.3 Definition of short fibers and method to find out it
- 2.4 Calculation to find out length uniformity of fibers
- 2.5 Definition of fiber maturity and its importance
- 2.6 Parameters affecting strength of fibers

Reference:

Cotton quality by USTER

TGT302:HUMAN RESOURCE MANAGEMENT

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 40 marks and external Examination conducted by University examination for 60 marks.

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ES E	PA	
TGT302	HUMAN RESOURCE MANAGEMENT	2	0	2	40	60	00	00	100

Theory:

Unit I: Introduction of Human needs, relations and values and Behavioural dynamics

- Appreciate importance of human resource
- Identify human motivations.
- Appreciate values and ethics for relationships
- Analyse self for interpersonal behaviour.
- Develop team spirit and positive attitude.

Unit II: Leadership Development and stress management.

- Use leadership qualities.
- Develop subordinates by motivations & training.
- Develop decision making ability
- Identify need for change and barriers to change.
- Suggest strategies for any change.
- Resolve conflicts.
- Analyse stress situation
- Manage stress.

Reference Books:

Sr. No.	Title of Books	Author	Publication
1.	Managing people at work.	Ahuja, Jain & Chhabra.	Dhanpatrai and Sons.
2.	Human Resource Management	D.R.Patel, Y.R.Joshi	Atul Prakashan.
3.	Human Resource Management	Biswajeet Pattanayak	PHI
4.	Human Resource Management	K. Aswathappa	Tata McGraw Hill
5.	Designing and Managing human resources systems.	Pareek, Udai and Rao T.V.	Oxford and TBH Publishing Co., New Delhi, 1981.

List of Learning Websites:

- www.cipd.co.uk/NR/rdonlyres/29D9D26D.../9781843982654_sc.pdf
- [www.slid
eshare.net/kumaravinash23/chapter-12-2634971](http://www.slideshare.net/kumaravinash23/chapter-12-2634971)
- [www.tuto
r2u.net/business/people/motivation_theory_mcgregor.asp](http://www.tutor2u.net/business/people/motivation_theory_mcgregor.asp)
- [www.you
tube.com/watch?v=RwZ4-GTSNUI](http://www.youtube.com/watch?v=RwZ4-GTSNUI)
- www.entrepreneur.com/article/204248
- <http://www.youtube.com/watch?v=pbxpg6D4Hk8>

TGT303: GINNING TECHNOLOGY 2

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 30 marks and external Examination conducted by University examination for 50 marks. Students are evaluated on the basis ESE for 40 marks and PA for 80 marks for practical examination.

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT303	GINNING TECHNOLOGY 2	2	2	4	30	50	40	80	200

Theory:

Topic 1: Cotton Transportation / Packing at Ginning

- 1.1 Cotton transportation systems by air and belt
- 1.2 Advantages / disadvantages with use of cotton transportation systems
- 1.3 Cotton quality improvement with the use of transportation systems
- 1.4 Structure of various suction fans, piping and their installation
- 1.5 Automatic bale pressing system
- 1.6 Packing materials for cotton bales

Topic 2: Parameters Affecting Characteristics of Cotton Fibers

- 2.1 Preparation before processing of cotton at ginning
- 2.2 Speeds of cotton transportation systems / angle of ducting and size of piping
- 2.3 Quality improvement in kapas with use of pre cleaning systems
- 2.4 Effect of condition of parts of roller gin machine on fiber quality
- 2.5 Effect of moisture on cotton, its level / control

Practical:

1. Observing effect of various transportation systems on cotton quality.
2. Identifying effect of cleaning system on final bale quality.
3. Checking of speed and settings of ginning machinery affecting fiber rupture and neps generation.
4. Checking of critical parameters of roller ginning machines affecting production rate.

Reference book:

Ginning technology by TMC

TGT304: SPINNING MACHINERY 2

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 30 marks and external Examination conducted by University examination for 50 marks. Students are evaluated on the basis ESE for 40 marks and PA for 80 marks for practical examination

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT304	SPINNING MACHINERY 2	2	2	4	30	50	40	80	200

Theory:

Topic 1: Speed Frame for Attenuation of Material

- 1.1 Objective of Machinery
- 1.2 Factors Affecting Quality of Roving Material
- 1.3 Method to Reduce Roving Stretch

Topic 2: Ring Frame and Winding for Spinning of Yarn

- 2.1 Principles of Machinery
- 2.2 Parameters Affecting Yarn Quality
- 2.3 Optimization various Parameters to Enhance Yarn Quality / Productivity
- 2.4 Methods to Minimize Yarn Breakages / Hairiness
- 2.5 Care to Eliminate Excessive Wear & Tear to Critical Parts

Practical:

1. Methods of measurement of moisture content of bales cotton and final yarn.
2. Finding out apron slippage at speed frame.
3. Measurement of pressure at suction tube of ring frames.
4. Measurement of top arm pressure/ Roller eccentricity at ring frame.

REFERENCE BOOK:

Spinning machinery BY SITRA

TGT305: COTTON TESTING PRACTICE

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 30 marks and external Examination conducted by University examination for 50 marks. Students are evaluated on the basis ESE for 40 marks and PA for 80 marks for practical examination.

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT305	COTTON TESTING PRACTICE	--	12	12	--	--	120	180	300

List of Practical:

1. Measuring length variability in cotton fibers
2. Checking of proportion of seeds, seed coats, leafy matter / sand dust etc. in cotton
3. Measurement of moisture level in cotton
4. Checking of content of immature bolls / clusters in kapas
5. Measurement of length of fibers by testing machine as well as manual
6. Testing of fiber fineness
7. Observing effects of ginning process / machinery on quality of cotton fibers
8. Studying effect of cotton sample collection system
9. Testing of fiber maturity and maturity ratio
10. Measurement of length of fibers by manual
11. Testing of Short fibres %
12. Testing of Cotton colour grade and its calculation
13. Calculation of Cleaning Efficiency of Machinery
14. Generation/ Reduction of neps
15. Testing of Fibre Strength and Elongation

Reference Book:

Physical Fibre Properties by USTER

TGT306: COMPUTER APPLICATION- II

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis ESE for 40 marks and PA for 60 marks.

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT306	COMPUTER APPLICATION	0	2	2	00	00	40	60	100

Unit	Major Learning	Topics and Sub-topics
Unit – I Using MS - PowerPoint 2007	1.1 Create new presentation and apply basic formatting features 1.2 Use master slide 1.3 Create and manipulate table 1.4 Work with objects and clips	1. Outline of an effective presentations, 2. Starting a New Presentation Files, Saving work, 3. Creating new Slides, Working with textboxes. 4. Changing a slides Layout, Applying a theme, Changing Colours, fonts and effects, Creating and managing custom Colour & font theme, Changing the background
UNIT-II MS-OFFICE INDIC & TBIL	2.1 Create application and other documents in Gujarati	1. Introduction about MS Office Indic 2. Installation of ms-office indic 3. How to change language English to Gujarati 4. Introduction about the Gujarati keyboards 5. Introduction about the Gujarati IME.
UNIT- III Introduction to Internet HTML	1. Use internet access efficiently.	Applications of the Internet: 1. E-mail 2. Voice mail 3. Newsgroup 4. Mailing list 5. Internet relay chat 6. Games 7. Video-conferencing 8. File transfer protocol
Unit – IV Using HTML	1. Comprehend the HTML page structure 2. Use basic formatting tags in HTML 3. Create and format Tables	1. Basic structure of HTML 2. Tables, Images and Links in HTML 3. Working with Multimedia Objects

LIST OF EXERCISES/PRACTICAL/EXPERIMENTS :

The exercises/practical/experiments should be properly designed and implemented with an attempt to develop different types of skills leading to the achievement of the competency. Following is the list of exercises/practical/experiments for guidance.

S. No.	Unit No.	Experiment
1	I	<ul style="list-style-type: none">• Basic operations of Power point, Create PPT and inset and delete slides• Create Project presentations, Lecture presentations.• Use of Mater Slide in Presentation• Apply basic formatting features in presentation like font, font size, font
2	II	<ul style="list-style-type: none">• Installation and keyboard setting of Gujarati indic.
3	III	<ul style="list-style-type: none">• Practice browsing of different sites using search engine• practice and understand different E-Mail services – Outlook, Yahoo mail, rediffmail etc
4	IV	<ul style="list-style-type: none">• Basic program of HTML• Program based on Inserting formatting tags for Text: bold, italic, underline, line break, special character, predefine headings, paragraph, comments.• Use Font color, size, background and Alignment

LEARNING RESOURCES:

A. List of Books

Sr. No.	Author	Title of Books	Publication
1	CISTEMS	INTERNET AN	TMH
2	SAGMAN	MICROSOFT OFFICE FOR	PEARSON EDUCATION ISBN 81-
3	C. XAVIER	WORLD WIDE WEB	TMH
4	COURTER	MASTERING MS OFFICE -	TECHMEDIA
5	DAVID D.BUCH	PAGEMAKER 6.5 /7	BPB PUBLICATION
		PHOTOSHOP 6/ 7	

B. List of Major Equipment/ Instrument

1. Computer
2. Projector
3. Equipments like printer,scanner,, plotter, modem

C. List of Software/Learning Websites

- I. Microsoft Office Professional 2010
- II. Norton Antivirus 2012
- III. Window 7.0
- IV. MS-OFFICE Indic

C.C. TEXTILE AND GINNING TECHNOLOGY

SEMESTER – IV

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT401	MACHINERY MAINTENANCE	0	6	6	--	--	80	120	200
TGT402	MODERN SPINNING TECHNOLOGY	4	2	6	30	50	40	80	200
TGT403	YARN QUALITY PARAMETERS AND THEIR TESTING	4	2	6	30	50	40	80	200
TGT404	PROCESS CONTROL AT SPINNING	2	4	6	30	50	40	80	200
TGT405	PROCESS CONTROL AT GINNING	2	4	6	30	50	40	80	200
	TOTAL			30	120	200	240	440	1000

TGT401:MACHINERY MAINTENANCE

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis ESE for 40 marks and PA for 60 marks for practical examination

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT401	MACHINERY MAINTENANCE	0	6	6	00	00	80	120	200

List of Practical:

1. Improving condition of critical parts of ginning and transportation systems.
2. Measurement of different settings of critical parts of ginning machines and set them.
3. Ideal grooving of ginning rollers.
4. Sharpening of fixed knives.
5. Measurement of speed of critical parts of ginning machinery.
6. Cleaning of ginning machinery.
7. Observing effect of greasing and oiling in ginning machines.
8. Observing performance baling press in terms of its pressing efficiency
9. Rectifying condition of spinning machinery.
10. Measurement of critical settings of spinning machinery.
11. Identifying sharpness of wire points of beaters and cylinders.
12. Checking of eccentricity of ring frame rollers.
13. Spindle centering at ring frame.
14. Cleaning of drafting zone.
15. Oiling and greasing of different parts of machinery.
16. Measuring Speeds of Various parts of spinning machinery

REFERENCE BOOK:

Ginning Machinery Maintenance by Bajaj Steel

Spinning Machinery Maintenance by LMW

TGT 402: MODERN SPINNING TECHNOLOGY

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 30 marks and external Examination conducted by University examination for 50 marks for theory and internal examinations for 80 marks and external examinations for 40 for practical.

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT402	MODERN SPINNING TECHNOLOGY	4	2	6	30	50	40	80	200

Theory:

1) New Technique for yarn production

- Friction Spinning, Open End Spinning, Compact Spinning etc.

2) Importance of open end spinning

- History
- Main Principle of open end spinning
- Why rotor spinning more potential compare of ring spinning?
- Type of raw material used for open end spinning

3) Rotor spinning Machinery

- Structure of machine
- Requirement of preparatory machinery and its process
- Detail study about spinning box, piecer and yarn clearing system
- Rotor speed, diameter, cleaning and its drive

4) Rotor spinning process

- Operating principle of the rotor spinning for cotton and man made fibres
- Use of comber noil and flat waste in open end mixing
- Fibre separation and fibre transfer in rotor
- Fibre collection and twist insertion in rotor
- Yarn formation and yarn tension in open end spinning

5) Automation in Rotor spinning

- Machine and Transport automation

6) Technological Aspects

- Modern Developments in rotor
- Limitations in rotor spinning
- Economics of Rotor yarn
- End uses of Rotor yarn

Practicals:

- 1) Observing effect of rotor speed on OE yarn
- 2) Checking Cleaning Efficiency of Rotor
- 3) Oiling and greasing of different parts of machinery.
- 4) Measuring Speeds of Various parts of spinning machinery

Reference Books:

- 1) Rotor Spinning- F.A. Lawrence
- 2) Modern Spinning Systems –W.Klein Vol.V
- 3) New Spinning Systems - R.V.Mahendra Gowda (NCUTE)

TGT403:YARN QUALITY PERAMETERS AND THEIR TESTING

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 40 marks and external Examination conducted by University examixnation for 60 marks

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT403	YARN QUALITY PARAMETERS AND THEIR TESTING	4	2	6	30	50	40	80	200

Theory:

Topic 1: Yarn Count / Strength and Twist/ Appearance

- 1.1 Meaning of Count and Strength
- 1.2 Testing Method to Find out Count / Strength
- 1.3 Calculation to Find out Variation of Count / Strength
- 1.4 Norms on Level Count / Strength and their Variability
- 1.5 Importance of Twist in Yarn
- 1.6 Method to Find out Twist and its Variability

Topic 2: Yarn Unevenness and Imperfections/ Yarn Faults

- 2.1Basics of Unevenness of Material/ Yarn Faults
- 2.2 Types of Imperfections
- 2.3 Fibers / Machinery Related Parameters Affecting Imperfections
- 2.4 Norms on Level of Yarn U% & Imperfections
- 2.5 Effect of Faults on Processing of Yarn / Fabric & Their Quality

Topic 3: Instruments for Testing various Quality Parameters

- 3.1 Wrap Reel and Balance for Checking Weight of Sliver/Roving/Yarn
- 3.2 Yarn Strength Testers for Checking Single Thread / Lea Form Yarn
- 3.3 Uster for Measuring Yarn Unevenness/ Imperfections & Hairiness
- 3.4 Classimat for Observing Level of Short / Long Thick-Thin Faults inYarn

Topic 4: Humidification and Yarn Conditioning System

4.1 Principles and Function

4.2 Importance of Systems

4.3 Type of Mechanism

4.4 Maintenance of Systems

REFERENCE BOOK:

- 1) Process Control At Spinning By A R Garde And T A Subramanian
- 2) Humidification System By C Doctor

List of Practical:

1. Measurement of Yarn Count and Strength values including their CV %.
2. Measurement of Yarn Imperfections/Faults and Twist.
3. Process for maintain the humidity in Ginning process.
4. Process for maintain the humidity in Spinning process.

TGT404:PROCESS CONTROL AT SPINNING

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 30 marks and external Examination conducted by University examination for 50 marks. Students are evaluated on the basis ESE for 40 marks and PA for 80 marks for practical examination

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT404	PROCESS CONTROL AT SPINNING	2	4	6	30	50	40	80	200

Theory:

Topic 1: Control of Yarn Properties

- 1.1 Number of Wrappings / Tolerance Limit
- 1.2 Parameters of Blow Room to Ring Frame Machineries
- 1.3 Setting between Rollers
- 1.4 Machinery Condition
- 1.5 Total Draft and Break Draft at Speed / Ring Frames
- 1.6 Top Roller Pressure / Hardness

Topic 2: Yarn Realization and Process Waste Control

- 2.1 Waste Losses at Blow Room / Carding /Combing
- 2.2 Yarn Waste
- 2.3 Sweepings
- 2.4 Invisible Loss
- 2.5 Moisture Level in Yarn

List of Practical:

1. Optimization of Speed and Setting Related Parameters.
2. Improving Yarn Quality.
3. Optimization of Waste Level.
4. Reducing End Breakage Rate at Ring Frame.
5. Reducing Variability in Yarn Quality.
6. Increasing Yarn Realization.
7. Optimizing Humidification System.
8. Reducing Apron Slippage

Reference Book:

Process Control At Spinning By A R Garde And T A Subramanian

TGT405:PROCESS CONTROL AT GINNING

TEACHING AND EVALUATION SCHEME: The objective of evaluation is not only to measure the performance of students, but also to motivate them for better performance. Students are evaluated on the basis of internal examinations for 30 marks and external Examination conducted by University examixnation for 50 marks.Students are evaluated on the basis ESE for 40 marks and PA for 80 marks for practical examination

Course Code	Course Title	Credit		Total	Marks				Total
		Th.	Pra/Field		Th.		Practical		
					I	E	ESE	PA	
TGT405	PROCESS CONTROL AT GINNING	2	4	6	30	50	40	80	200

Theory:

Topic 1: Cleaning of Cotton and Rupture of Fibers

- 1.1 Checking of Trash Content in Ginned Cotton
- 1.2 Preparation of Kapas
- 1.3 Machinery Condition
- 1.4 Machinery Parameters
- 1.5 Level of Moisture in Kapas

Topic 2: Ginning% and its Productivity

- 2.1 Quality/ Preparation of Seed Cotton
- 2.2 Speed of Gin Machineries
- 2.3 Condition of Critical Parts

Reference Book:

Process Control at Ginning by P H Shah

List of Practical:

1. Optimization of speed and setting related parameters.
2. Improving condition of critical parts.
3. Deciding ideal process sequence.
4. Optimization of moisture content in materials.
5. Enhancement of cotton realization.
6. Improving productivity.
7. Improving Raw- material preparation
8. Snap Study for Ginning machinery