

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA IN TEXTILE MANUFACTURING TECHNOLOGY

SEMESTER: V

Subject Name: **Quality and Process Control in Spinning and Weaving**

Sr. No.	Course content
1.	Scope of process control in spinning: <ul style="list-style-type: none"> 1.1 Scope of process control in spinning. 1.2 Key variables for process control. 1.3 Establishing norms of standards
2.	Control of mixing & yarn realization: <ul style="list-style-type: none"> 2.1 Preparation of samples-Bulk. Basic, laboratory. 2.2 Relationship of fiber characteristics with quality of yarn. 2.3 Fiber quality index. 2.4 Different ways for improving mixing-cost ratio. 2.5 Factors affecting yarn realization. 2.6 Norms for yarn realization.
3.	Control of quality & cleaning in B.R ,Card & Comber: <ul style="list-style-type: none"> 3.1 Determination of trash content & cleaning efficiency. 3.2 Norms for cleaning & waste in B.R. & Cards. 3.3 Optimizing cleaning at carding. 3.4 Technological consideration for comber waste. 3.5 Optimum level of comber waste.
4.	Control of yarn quality: <ul style="list-style-type: none"> 4.1 Factors affecting count variation <ul style="list-style-type: none"> - within bobbin count variation. - between bobbin count variation. 4.2 Control of variability of lea strength. 4.3 Norms for lea strength. 4.4 Types of yarn irregularity. 4.5 Causes of unevenness. 4.6 Different types of yarn imperfection: thick, thin & neps. 4.7 Causes of above imperfection.
5.	Yarn faults & package faults: <ul style="list-style-type: none"> 5.1 Different yarn faults. <ul style="list-style-type: none"> - Slubs, crackers, hairiness. 5.2 Different package faults. <ul style="list-style-type: none"> - slough off, spinners double, bad piecing

6.	Machine Audit: 6.1 Impact of machine condition of processing performance & yarn quality. 6.2 Different test instruments for machinery audit & their use.
7.	Scope of process control in weaving: 7.1 Scope for process control in weaving. 7.2 Approach to process control in weaving
8.	Process control in winding & warping: 8.1 Removal of spinning defects. 8.2 Quality of knot. 8.3 Courses & remedies for package defects. 8.4 Norms for process parameters. 8.5 Minimizing end breaks in warping. 8.6 Quality of warping beam. 8.7 Causes of low productivity at warping
9.	Process control in sizing: 9.1 Control of size pickup. 9.2 Control of yarn stretch. 9.3 Quality of size beam.
10.	Process control in loom shed: 10.1 Control of loom efficiency. 10.2 Control of fabric defects.
11.	On line control in spinning & Weaving.

Reference Books:

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| 1. Quality & process control in spinning. | - ATIRA |
| 2. Quality & process control in weaving. | - ATIRA |
| 3. Quality & process control in spinning. | - SITRA |
| 4. Norms for Textile. | - SITRA |