

# GUJARAT TECHNOLOGICAL UNIVERSITY

## DIPLOMA IN TEXTILE MANUFACTURING TECHNOLOGY

Semester: 4

**Subject Name      WEAVING TECHNOLOGY - II**

| Sr.No | Course content                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| 1.    | <b>SIZING :</b><br>1.1 Objects<br>1.2 Ingredients and their uses.<br>1.3 Mechanism of sizing m/cs.(Multi Cylinder )<br>1.4 Size cooking.<br>1.5 Process Parameters.<br>1.6 Methods of sizing.<br>1.7 Sizing of various yarn.<br>1.8 Size calculations.<br>1.9 Product testing.<br>1.10 Drawing in Process.<br>1.11 Routine maintainance in sizing.<br>1.12 Sizing defects and their remedies                                                                                             |
| 2.    | <b>Multiple box motions.</b><br>2.1. Eccles drop box motions<br>2.2 Out line of Pick- Pick - at - will motions.<br>2.3 Pattern mechanism on shuttleless weaving machines.<br>2.4 Speed parameters of box loom.                                                                                                                                                                                                                                                                           |
| 3.    | <b>Jacquard.</b><br>3.1. Introduction - scope and classification, capacity.<br>3.2. Single lift jacquard : mechanism, working principle, drive timing.<br>3.3. Double lift single cylinder jacquard : comparison between single lift and double lift, working principle, drive.<br>3.4. Harness mounting (ties)<br>3.5. Card cutting and lacing.<br>3.6. Working principle of electronic jacquard.                                                                                       |
| 4.    | <b>Automatic looms.</b><br>4.1. Characteristics and advantages of automatic looms over non-automatic looms.<br>4.2. Types of automatic looms.<br>4.3. Comparison of cop changing v/s shuttle changing looms.<br>4.4 Automatic cop changing mechanism :<br>-Types of weft feeler : Electrical & mechanical<br>-Three try stop mechanism<br>-Description of different parts of cop changing mechanism<br>4.5. Study of Positive shedding motion<br>4.6. Study of Positive let off motions. |

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|  | <p>4.7. Warp stop motions.</p> <p>(i) Function</p> <p>(ii) Types : electrical, mechanical &amp; electronic.</p> <p>4.8. Weft stop motion.</p> <p>(i) Photo cell</p> <p>(ii) Electronic</p> <p>4.9. Weaving of blend yarn and filament yarn in conventional auto machines.</p> <p>Environmental and safety aspects in weaving.</p> <p>-Types of pollution : noise and air</p> <p>-Causes and prevention.</p> |
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## LABORATORY EXPERIENCES :

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| 1.  | Study of Different Types of Creel For Sizing Machines. |
| 2.  | Passage of Material through Morden sizing machine.     |
| 3.  | Mechanism of Drying Cylinder.                          |
| 4.  | Driving of Weaver's Beam                               |
| 5.  | Different Beam Pressing Motion                         |
| 6.  | Mechanism of Eccle's drop box motion.                  |
| 7.  | Driving Mechanism for Pattern Cylinder.                |
| 8.  | Principle of Jacquard Shedding and Mechanism           |
| 9.  | Harness Mounting in Jacquard                           |
| 10. | Classification of Auto looms.                          |
| 11. | Different Types of feeler motion                       |