

(Textile Engineering Department)

Undergraduate

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**Course Title: Modern Spinning Systems**

**Prerequisite:** Principles and Mechanism of Spinning

**Number of Credits: 2**

**Lecturer: Dr. Majid Safarjohari**

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**Course Topics:**

- Limitation of ring spinning system
  - Discuss the principles of compact spinning process and its yarn formation mechanism and comparing their properties with conventional ring spun yarns
  - Discuss different types of compact spinning systems
  - Discuss the principles of siro spinning process and its yarn formation mechanism and their properties
  - Discuss the principles of Solo spinning process and its yarn formation mechanism and their properties
  - Discuss the principles of Self twist spinning process and its yarn formation mechanism and their properties
  - Midterm assessment
  - Discuss the principles of Open end spinning process and their classification
  - Discuss the principles of Rotor spinning process
  - Discuss the principles of yarn formation in Rotor spinning process
  - Discuss the yarn structure and physical properties of Rotor spun yarns and compare them with ring spun yarn.
  - Discuss the principles of Air jet spinning process
  - Discuss the principles of yarn formation and internal structure of Air jet spun yarn
  - Discuss the principles of Friction spinning process and their structural properties
  - Practical work with automatic Lab spinner machine, air jet, self-twist and friction spinning machine
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**Reading Resources:**

- The Textile Institute, Manual of Textile Technology, Short Staple spinning Series, Vol. V, New Spinning System, W. Klein.