

(Textile Engineering Department)

Undergraduate

Course Title: **Weaving Process**

Prerequisite: Spinning Process, Mathematics (II)

Number of Credits: 3

Lecturer: Dr. Houshang Nosrati

Course Topics:

- Definitions and introduction to fabric production
 - Weaving preparation, winding process, winding machines, winding calculation
 - Direct and sectional warping
 - Sizing, description of sizing machine sections, sizing materials
 - Weaving, principal operation for woven fabric production
 - The loom parts and their duties, effective parameters for loom choice
 - Shedding, weaving structure techniques, drawing- in
 - Shedding mechanisms and their applications
 - Beating, beating- up mechanisms, beating movement equation
 - Shuttle less weft insertion, comparison between shuttle and shuttle less looms
 - Shuttle less loom dividing and operation principles, application of shuttle less looms
 - Warp yarn let-off motion, let-off mechanisms, and warp yarn tension
 - Cloth take- up, study of different take – up mechanisms
 - Automation and monitoring in weaving machines
 - Weaving calculations
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Reading Resources:

- Weaving, Conversion of yarn to fabric, P.R. Lord & M.H. Mohammed, Merrow publication, 1988.
- Principles of Weaving, Robinson and Marks, Textile Institute, 1986.