

Sant Gadge Baba Amravati University

Department of Lifelong Learning & Extension

Short Term Certificate Course

(3 Month)

Syllabus

For

Certificate Course in Chemical Processing

(Introduction to Chemical Processing)

Unit-1:

Introduction: Sizing, Desizing & Singeing

Basic knowledge about various aspects of Desizing, Chemicals and enzymes, function and operation of the machines to get optimum production., Importance of Desizing of fabrics, Details of the machine, Knowledge of chemicals used. Basic knowledge about various aspects of Singeing machine function and operation to get optimum production, Importance of Singeing of fabrics.

Unit-2:

Fabric scouring, Bleaching and Mercerizing

Basic knowledge about various aspects of Scouring, Bleaching and Mercerization processes. Machine function and operation to get optimum production, Importance of Mercerizing of fabrics, Details of the machine, knowledge of chemicals and machines used during these processes.

Unit-3:

Yarn and Fabric Dyeing

Basic knowledge about various aspects of dyeing. Importance of dyeing of yams cheese form, and Beam form, Details of the machines, Knowledge of colours, chemicals and machines (Jigger, Jet dyeing machine) used for fabric dyeing.

Unit-4:

Printing

Basic knowledge about various aspects of fabric Printing. Ingredients used in printing paste. Styles of printing (Direct, Resist, Discharge). Printing machines- Roller printing, screen printing, rotary screen printing, transfer printing,

Unit - V:

Stenters and Finishing

Basic knowledge about various aspects of Stenter machine, function and operation to get optimum production. Importance of finishing, various types of finishing processes viz. Sanforising, antcrease and calendaring. Details of the machine, Knowledge of chemicals used.

PRACTICALS

1. Understanding the Process and material flow in Textile mill
2. Understanding the importance of fibers, types of yarn, yam count.
3. Preparation of desizing solution.
4. Scouring of cotton material.
5. Bleaching of fabric.
6. pH control by using chemicals.
7. Preparation of dye bath for soluble dyes.
8. Preparation of dye bath for insoluble dyes.
9. Dyeing of cellulosic fabric.
10. Dyeing of synthetic fabric.
11. Study of dyeing faults.
12. To study screen printing.

Books Recommended :

- 1) Technology of bleaching and mercerization by V. A. Shenai.
- 2) Technology of dyeing by V. A. Shenai.
- 3) Technology of printing by V. A. Shenai.
- 4) Textile Processing and Properties : Preparation, Dyeing, finishing and performance —Tyrone L. Vigo, Elsevier