COURSE TITLE: TEXTILE WET PROCESSING II
COURSE CODE: 4063
COURSE CATEGORY: A
PERIODS/WEEK: 4
PERIODS/SEMESTER: 56
CREDITS: 4

TIME SCHEDULE

<table>
<thead>
<tr>
<th>Module</th>
<th>Topics</th>
<th>Periods</th>
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<tbody>
<tr>
<td>1</td>
<td>Dyeing of Wool, Silk &amp; Manmade Fibers</td>
<td>14</td>
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<tr>
<td>2</td>
<td>Dyeing of Blended material &amp; Dyeing Machineries</td>
<td>14</td>
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<tr>
<td>3</td>
<td>Printing</td>
<td>14</td>
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<tr>
<td>4</td>
<td>Finishing</td>
<td>14</td>
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<td>TOTAL</td>
<td>56</td>
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COURSE OUTCOME

<table>
<thead>
<tr>
<th>Module</th>
<th>GO</th>
<th>Student will be able to</th>
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<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>Understand the dyeing of wool &amp; silk</td>
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<tr>
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<td>2</td>
<td>Know the dyeing of manmade fibers</td>
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<tr>
<td>2</td>
<td>1</td>
<td>Understand the dyeing procedure of blended materials.</td>
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<tr>
<td></td>
<td>2</td>
<td>Know the various dyeing machineries</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>Understand the methods &amp; styles of printing</td>
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<tr>
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<td>2</td>
<td>Know the working of various printing machineries</td>
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<tr>
<td>4</td>
<td>1</td>
<td>Know the importance of finishing process and the application of different finishes to textiles</td>
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SPECIFIC OUTCOME

MODULE I DYEING OF WOOL, SILK & MAN MADE FIBERS

1.1.0 Understand the dyeing of wool & silk
1.2.0 List the various dyes used on wool and silk
   1.2.1 Identify the chemical preparatory processes for wool and silk fibres
   1.2.2 Explain the method of dyeing wool.
   1.2.3 Describe the method of dyeing silk
1.3.0 Know the dyeing of manmade fibers
   1.3.1 List the various dyes used for Man-made fibres
   1.3.2 Explain the preparation of material, principle of dyeing and method of dyeing man-made fibres
   1.3.3 Describe the application of disperse dyes on polyester
   1.3.4 Explain the application of Basic dyes on Acrylic fibers

MODULE II DYEING OF BLENDED MATERIAL & DYEING MACHINERIES

2.1.0 Understand the dyeing procedure of blended materials.
   2.1.1 Explain the Dyeing of Polyester – cotton blends with disperse and vat dyes.
   2.1.2 Describe Dyeing of polyester – cotton blends with disperse and reactive dyes.
   2.1.3 Explain the Dyeing of Polyester – viscose blends with disperse and vat dyes
   2.1.4 Explain the Dyeing of Polyester – viscose blends with disperse and reactive dyes.
   2.1.5 Explain the Dyeing of Polyester – wool blends with disperse and acid dyes.

2.2.0 Know the various dyeing machineries
   2.2.1 Explain dyeing of loose cotton by continuous method
   2.2.2 Illustrate package dyeing machines.
   2.2.3 Describe the different fabric dyeing machines.
   2.2.4 Explain Jigger, Padding mangles and Winch dyeing machine.
   2.2.5 Explain HTHP& jet dyeing machines

MODULE III PRINTING

3.1.0 Understand the methods & styles of printing
   3.1.1 Define printing and state the objectives of Textile printing
   3.1.2 Differentiate Dyeing & Printing
   3.1.3 List the ingredients used in printing & preparation of printing paste.
   3.1.4 Describe the preparation of cloth for printing.
   3.1.5 Differentiate between methods of printing & styles of printing.
   3.1.6 Explain the different methods of printing.
   3.1.7 Describe the basic concepts of different styles of printing.

3.2.0 Know the working of various printing machineries
   3.2.1 Describe the working of flat bed screen printing machine.
   3.2.2 Explain the features of rotary screen printing machine.
   3.2.3 Describe the features & working of single & multicolour roller printing machines.
   3.2.4 Illustrate the features of duplex printing machine.
   3.2.5 Explain the working of transfer printing machine.

MODULE IV FINISHING

4.1.0 Know the importance of finishing process and the application of different finishes to textiles
   4.1.1 State the objectives of finishing.
   4.1.2 Classify the finishes.
4.1.3 Explain water mangle, Hydro extractor, Drying machine, Damping & stentering and starch finishing
4.1.4 Describe Calendaring & Sanforizing
4.1.5 State Anti-crease finishes
4.1.6 Illustrate water repellent and water proof finishes.
4.1.7 Identify mildew, moth and rot proof finishes.
4.1.8 Illustrate flame retardant finishes

CONTENT DETAILS

MODULE I

DYEING OF WOOL, SILK & MAN-MADE FIBRES

Various dyes used for protein fibres-Preparation of wool and silk for dyeing-Dyeing of wool with Acid dyes-Basic dyes-Reactive Dyes-Dyeing of silk with Acid dyes-Basic dyes-Reactive dyes-Principles and methods of dyeing of man-made fibers-Preparation of material (man-made) for dyeing-Dyeing of man-made material -Polyester with disperse dyes-Acrylic with basic dyes.

MODULE II

DYEING OF BLENDED MATERIAL AND DYEING MACHINERIES


MODULE III

TEXTILE PRINTING

Definition and objectives of printing-Differentiate between dyeing & printing-Ingredients used in printing & preparation of print paste-Preparation of cloth for printing-After treatments given to printed fabrics-Differentiate methods of printing & styles of printing- Study of different methods of printing -Block printing- Stencil Printing-Screen Printing-Automatic flat bed screen printing-Rotary screen printing-Roller printing-Transfer printing-Study of basic concepts of following styles of printing-Direct, Discharge, Resist and Dyed styles-Batik style and dyes used for batik style- Tie and dyeing- Foam printing- Flock printing- Damask printing-Kalamkari printing.
MODULE IV

FINISHING


REFERENCE BOOKS

1. V.A.Shenai Technology of dyeing
2. R.S.Prayag Dyeing of polyester and polyester blends
3. V.A.Shenai Technology of Printing
4. J.T.Marsh Textile Finishing
5. E.R Trotman Dyeing & Chemical Technology of textiles
6. D.G.Kale Principles of Textile Printing
7. Srivastave Recent processes in Textile Bleaching, Dyeing & Finishing
8. R.R.Chakravarthy A glimpses on the Chemical Technology of Textile Fibres
9. R.S.Prayag Textile Printing