Description

The second of two laboratory courses in textiles, APDM 321L Textiles II Lab, covers the laboratory portion of the course which stresses laboratory examination and investigation of textile performances. Lecture and laboratory must be taken concurrently. APDM 320 is the prerequisite that must be taken prior to APDM 321L. APDM 321L fulfills the DY requirement.

Competencies

By the end of the semester the student will be able to:

1. Compare the history, method of production, and properties of chemical groupings of fibers.
2. Use the various means the consumer and textile expert have at their disposal to determine selected properties of a fabric and interpret results of laboratory tests using standardized criteria.
3. Summarize and express, in an acceptable style of writing, both test results and the possible reasons for those results.
4. Apply knowledge of fibers, yarns, fabric construction, dyes, and finishes to both the understanding of the interrelationships within a fabric and to examine why a selected fabric exhibits certain properties.
5. Communicate results of testing and subsequent recommendations for care to people who do not have a textiles testing background.
6. Write legally correct and meaningful care labels thus exhibiting knowledge of both the Trade Rule on Care Labeling and consumer needs related to garment care.

Books and Equipment

Required:

3. $ Laboratory Fee to cover the cost of fabrics purchased by the instructor for testing.
4. Care Label Rules Handout which will be handed out in class.

Recommended Books:


Assignments and Exams

1. Twenty Laboratory reports
2. Laboratory preparation quizzes
3. Final Reports (20-lab reports)
Grading

1. The laboratory class will be graded on a point system where there will be 100 possible points to earn. The laboratory projects will be worth 30 points, quizzes will be worth 10 points, the final report which will include all corrected laboratory reports will be worth 30 points, and attendance, laboratory preparedness, and posting of data on the Miller Hall chart will be worth 30 points.

   Division of points

   Laboratory projects 30 points
   Quizzes 10 points
   Final report 30 points
   Lab participations & Attendance 30 points

2. Grading Scale

<table>
<thead>
<tr>
<th>Total Points Earned</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90–100</td>
<td>A</td>
</tr>
<tr>
<td>80–89</td>
<td>B</td>
</tr>
<tr>
<td>70–79</td>
<td>C</td>
</tr>
<tr>
<td>60–69</td>
<td>D</td>
</tr>
<tr>
<td>59 or less</td>
<td>F</td>
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</tbody>
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3. Laboratory projects will be graded not only on quality and completeness of data and data analysis but also on their written quality. Projects need to be written clearly and precisely to earn the most possible points. Poorly written assignments will be graded lower. Students who are having difficulty with writing should go to the Writing Workshop or ELI for assistance. Students who show evidence of using the Writing Workshop will be allowed some leniency on due dates.

4. Turning in late assignments: All assignments will be graded down one tenth (0.1) per day after the due date. It is better to be late than to not turn in an assignment. Late assignments may or may not be accepted after they have been discussed in class. There are set deadlines throughout the semester after which work will not be accepted. If a student cannot meet a deadline, he or she may negotiate in advance for a new deadline as long as this privilege is not abused.

5. Lab reports that were not initially submitted for a grade but are submitted as part of the Final Report (lab manual) will not be graded individually.

Withdrawing from the Course

Withdrawal from the course will be available until the date set by the University. After this date withdrawing from the course will not be allowed. Exceptions will be made when extenuating circumstances exist.

Attendance

1. Attendance is required at all laboratory classes. Two points from your final grade will be deducted for each absence or unreasonable tardiness.
2. If for some legitimate reason you know you are going to miss a lab class you can make arrangements to attend another lab. It will be the student’s responsibility to contact the teacher in advance for permission. There are some labs where it is not possible to handle more than the assigned number of students and therefore students may not be able to switch lab sections. In some situations arriving late may mean a student will not be allowed to participate in that lab.

Laboratory Schedule

APDM 321L TEXTILES II Laboratory
Tentative Schedule

Week 1:
  Introduction
  Distribute fabric swatches and analyze their physical properties, use digital microscope to produce digital images of fabric swatches

Week 2:
  AATCC 8 Colorfastness to Crocking
  AATCC 15 Colorfastness to Perspiration

Week 3:
  AATCC 16 Colorfastness to Light
  AATCC 125 Colorfastness to Perspiration and Light

Week 4:
  AATCC 172 Colorfastness to Non-Chlorine Bleach in Home Laundering
  AATCC 188 Colorfastness to Sodium Hypochlorite Bleach in Home Laundering

Week 5:
  AATCC 133 Colorfastness to Heat: Hot Pressing
  AATCC 143 Appearance of Apparel and Other Textile End Products after Repeated Home Laundering

Week 6:
  AATCC 118 Oil Repellency
  AATCC 130 Soil Release

Week 7:
  AATCC 22 Water Repellency: spray test
  AATCC 42 Water Resistance: impact penetration test

Week 8:
  AATCC 179 Skewness Change in Fabric and Garment Twist Resulting from Automatic Home Laundering

Week 9:
  ASTM D737 Air permeability
Week 10: Universal machine
   ASTM 5034 Standard Test Method for Breaking Strength and Elongation of Textile Fabric (Grab Test)
   ASTM D2261 Tearing Strength by the Tongue Tear Test Method

Week 11:
   ASTM 2414 Tearing Strength of Fabrics by Falling-Pendulum (Elmendorf) Apparatus
   AATCC 128 Wrinkle Recovery of Fabrics

Week 12:
   ASTM D 4970 Pilling Resistance (Martindale Tester)

Week 13:
   AATCC 142 Appearance of Flocked Fabrics after Repeated Home Laundering and/or Coin-Op Dry-cleaning

Week 14:
   Data Analysis

Week 15:
   Prepare Final Report

Week 16:
   Final Report Due