M.S. in Design Studies: TEXTILE SCIENCE Concentration (no thesis option)

Students are admitted to the Human Ecology: Design studies graduate program with an MS concentration in Textile Science. This is a non-thesis option degree, suitable for professionals involved in product development, marketing and design. Students are trained to understand the physical and chemical properties of natural and synthetic fibers and their interaction with dyes, finishes, and textile sustainability. They will complete a series of courses and complete an individually-focused capstone project.

Facilities:

Textile Science Laboratory
Weaving studio with hand, Dobby and Jacquard looms
In-house and campus computer labs with CAD and related software
Comprehensive textile collection  (Helen Louise Allen Textile Collection)
Ruth Davis Design Gallery

There are many other laboratories within the campus that students have access to including Plasma Center, Forestry Department, Forest Product Labs, Chemistry Department, Materials Science Department and Materials Science Center.

Minimum Degree Requirements:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>DS Core</td>
<td>6</td>
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<tr>
<td>Area of Concentration</td>
<td>12</td>
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<tr>
<td>Capstone</td>
<td>3</td>
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<tr>
<td>Statistics/Research Methods</td>
<td>3</td>
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<tr>
<td>Elective courses</td>
<td>6</td>
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<tr>
<td>Total</td>
<td>30</td>
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Design Studies Core Courses (take min of 6 credits):

DS --- New Sustainability course
DS 920, Methods of Inquiry

Take Minimum of 12 credits from the following DS Courses:

DS 451, Color Theory and Technology
DS 427, Print and Dye II
DS 429, Weaving II
DS 561, Textile Specification and End-use Analysis

Research Method/Statistics Courses (minimum 3 credits):

Stat 312, Introduction to Mathematical Statistics
Stat 333, Applied Regression Analysis
Stat 424, Statistical Experimental Design for Engineers
Stat 431, Introduction to Theory of Probability

UW-Madison, School of Human Ecology Professor Majid Sarmadi – December 18 2015
Suggested Elective Courses:

Chemistry Courses:
Chem 345, Intermediate Organic Chemistry
Chem 547, Advanced Organic Chemistry
Chem 561, Physical Chemistry
Chem 563, Physical Chemistry Lab
Chem 540, Polymer Science and Technology

Forestry Courses:
Forestry 611, Carbohydrate Chemistry
Forestry 612, Cellulose Chemistry *(crosslisted with DS)*
Forestry 616, Paper and Nonwovens *(crosslisted with DS)*

Engineering Courses:
ECE 525, Introduction to Plasmas
ECE 528, Plasma Processing and Technology
ECE 926, Seminar in Plasma-Aided Manufacturing
MS&E 570, Properties of Solid Surfaces

Maximum of 6 credits from the following DS independent study courses can be counted toward the MS degree

DS 999, Independent study in Synthetic Fibers
DS 999, Independent study in Dyeing of Fibrous Materials
DS 999, Recent Development in Textiles and Clothing
DS 999, Independent Study in Plasma Modification of Natural and Synthetic polymers
DS 999, Independent Study in Recycling of Plastics and Textile Waste
DS 999, Independent Study in Knitting and Knitting Technology
DS 999, Independent Study in Textile Finishing