



COLORATION PROJECT IN ADVANCED TEXTILE SCIENCE

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Advanced Textile Science includes a six-week unit on dyeing. We study dye and color mixing theories, fiber-dye chemistry, equipment, and color matching, fastness, and uniformity. We dye cotton with direct and reactive dyes and wool with acid dyes using subtractive primaries (yellow, magenta, and cyan). We mix dyes to produce a color wheel of primary and secondary colors. Each student has a specific task that changes with each lab and receives samples of each color.

A three-part project is the final activity. For part one (due 10 days before the other parts), the student submits a sample (paper, fabric or other material) of a desired color and the fiber and dye class needed. In part two, the student mixes the dye using only the primary dyes (plus black as needed) to achieve the color, submitted in part one, on a textile. In a paper (part three), the student explains her/his application of dye and color mixing theory, dye bath mixing, and dyeing process and evaluates the process and the dyed object. Most of the grade is based on their assessment of the dyed object (Is the dye level? Is the dye permanent? Is the color a good match?) and proposed modifications to produce a more level dye, more permanent color, or better color match.

This project helps students apply their knowledge, experience the challenges of dyeing, understand dye tinctorial strength, and relate preparation to successful dyeing. This unit is a favorite of most students. They enjoy dyeing and understand the difficulties involved in color matching, level color, and fastness. Graduates are more professional in communicating color needs because they understand the challenges involved in achieving a level, permanent color.