



Strategic Illusions: Collaborative teaching project

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Strategic Illusions is a Cotton Inc. sponsored collaborative teaching project that included two classes – one is a computer aided design class and the second an advanced garment assembly class. The goal of the advanced engineered garment design teaching project was to develop engineered garment designs for 100% cotton fabric which were designed specifically to incorporate strategically placed textile designs to camouflage the naturally occurring wrinkles on the garment. The outcome incorporated integrated multiple surface design techniques and engineered garment design placement which embrace and/or camouflage the natural wrinkling qualities of cotton fabric.

This project included the use of twenty-two custom developed step by step video tutorials to allow students to individually work to advance their creative and technical skills with the initial design process at their own pace. The video tutorials included initial research, photography, and a variety of techniques to develop backgrounds for engineered garments. The video tutorials also included a 3D OptiTex section to show students how to export garment patterns to Adobe Illustrator. The tutorials showed how to set-up and prepare the Illustrator file for inserting engineered surface designs into the garments pattern pieces as well as simulated and strategically placed wrinkles/ruching/textures. Additional videos were developed to instruct students how to virtually test their garments on the custom body scanned avatar models that would be wearing their garments. Students also had videos to instruct them how to take snapshots of different views of their virtual 3D garments with and without the custom model. The course was structured so that students would work independently and at their own pace with support from multiple faculty members.

The students began by developing a concept board, color board and description of their inspiration. The video tutorials guided and encouraged the students to creatively experiment with a variety of techniques to develop engineered textile designs on a prototype sample garment pattern. During this time a trip to the zoo was arranged where students took many photos of fauna and flora to incorporate into their collection concepts.

Normal wear of a 100% cotton dress or pants produces naturally occurring wrinkles in specific areas (ex: in the bending areas of the body.) Initially, a basic long sleeved muslin sheath was wear tested to locate areas of naturally occurring wrinkles during normal wear. This sheath formed the basic model for custom designs. During the first half of the semester when students were experimenting with techniques, six student models were located and each one underwent a body scan. A virtual avatar was developed for each model. Customized garment styles, modifications of the fitted long sleeve sheath, were developed and one style was assigned to each

model. Each student was assigned three garment styles/models and developed two garment designs for each model, therefore developing a minimum of six engineered textile prints. These engineered textile prints were designed to strategically integrate with and/or camouflage wrinkles. Once the textile prints were imported and placed on the selected garment, they were all virtually tested and photographed (virtually) by each student.

At the final presentation, each student presented their concept, description, inspirations and color boards in addition to the six engineered garment designs. A combination of students and faculty determined which three engineered garment designs best represented the creative and technical range for each student. Printing of the chosen designs took place on the departments Mutoh VJ-1638 dual-head Valuejet using Nano Pigments of dyes onto 100% cotton fabric. The fabric was then processed with a Practix Manufacturing OK-08 heat press to set the dye. The garments were constructed by students in an apparel assembly class.

At the end of the fall semester, students were asked to provide feedback on this experience. All the students found this class to be a strongly positive experience. They also found the video tutorials helpful and used the videos to experiment with a variety creative imagery development techniques. The students also gave suggestions for the next time the faculty introduce this type of project: to allow the textile print designers to stitch the garments themselves instead of having a second class involved. Another class is planned for the near future with a different textile design challenge.

