



Pen Umbra

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Mentor Statement:

I have known and mentored the two students from the last year when I taught Fashion CAD. I also taught them in my class, Activewear Design and Product Development during the Spring 2019. This entry is part of their final project in the course. They completed their final project where they were required to develop unique activewear inspired by world top designers' collections. They were also required to use creative embellishment and also to make the outfit functional and comfortable as activewear. My mentoring was focused on their implementation of unique embellishment, patterning, material choice and seaming methods. I also provided guidance and feedback on their surface design to make their outfit look unique and also functional while teaching how to execute their ideas in using stretchy fabrics. I also taught them how to use a 3D virtual garment construction and fit assessment tools for their simulation of the design ideas by using a 3D virtual fit simulation program called CLO3D. Effective use of a few different black materials made the outfit look stylish and added interesting dynamics and rhythm. In addition, the appropriate use of mesh fabric around the chest, upper back, thigh and calf can improve ventilation and thermal comfort during athletic activities. The outfit was well made with professional finish with neat construction.

Design Statement:

This activewear look draws inspiration from the Commes des Garçons Fall 2019 Ready-to-Wear collection. The line, designed by CDG's creative director Rei Kawakubo, was inspired by fears Kawakubo has in today's world: "the 21-century arms race from an Asian perspective, what with Donald Trump playing with fire with the North Korean dictatorship, and Japanese political protest about the plan to move an American military base to an ocean site, endangering the marine environment..." (Mower, 2019). Moreover, her motifs of darkness and fear are infused with the notions of malignant forces in human nature.

Because most of the collection is black, architectural shapes and textured fabric are used to make individual pieces dynamic and sharp. Although the collection is visually appealing, it is difficult to imagine any of the looks being worn off the runway. In order to reimagine this collection in a more practical sense, we decided to create an activewear look inspired by the Commes des Garçons collection. Using similar mixed media elements such as layering, mesh, and structure, we created an edgy yet dynamic look that can be worn to, from, in, or outside of the gym.

The name of the piece, pen-umbra, is coined from its parallels to the anatomy of a shadow. The umbra is the dark, inner region of a shadow and the penumbra is the partially shaded outer region. By referencing both of these components through hyphenation, our title encapsulates the duality of darkness (fears), light (moving away from those fears), and the curious, intermediate area between the two. As such, we wanted to play with what Kawakubo describes as “the gathering of shadows,” while re-envisioning an ensemble that is simultaneously clean, functional, and marketable.

To materialize this concept, we decided to create a long sleeved sports bra-top with matching leggings. As common themes throughout the collection included layered surface design, fishnet mesh, and shaped shoulders, we wanted to incorporate these elements without disrupting the functionality of the garments in activewear/athleisure.

The top is constructed primarily out of neoprene to allow for the shaping of the shoulders and a snug fit around the bust. It is structured, yet stretchy and comfortable. In order to keep the neoprene flat, the shoulder seams are constructed using a flatlock stitch and all other seams are serged first and topstitched with a zigzag stitch. The mesh panels in the front and back create visual interest while allowing breathability while working out. This is especially useful as it is long sleeved. The surface design on the top was added to create visual interest across the bust.

The surface design element was constructed by cutting out 1” x 2” pieces of spandex, jersey, powermesh, and football jersey mesh fabrics. The swatches were arranged in rows along the main piece of the top and pinned into place, with each row ¼” offset to cover the stitchlines of the row below. They were then attached to the bodice with a zigzag stitch to maintain the stretch properties of the fabric.

The leggings are designed from a thick cotton-spandex blend and thin black mesh. The design of the leggings draw upon two key athletic-wear trends identified through independent market research: the high waist and the ¾ pant length. The snug fit of the warm cotton stretch provides warmth and compression that facilitates athletic activity, and the mesh allows for ventilation and breathability to prevent overheating. The mesh has been wrapped around the leg at an atypical slant for a sense of sharpness. An oval mesh shape is also found at the calf’s inseam as a juxtaposition against the straight lines of the aforementioned accent. Though the element of the mesh has been incorporated in different ways in the top and bottom, both pieces are unified by its inclusion. To ensure that the pants would enable stretch upon dressing, the inseam, the waist seam, the center-front, and center-back crotch seam were stitched using a serger. The mesh was also stitched using a serger, but topstitched with a zig-zag seam to flatten the seam allowance.

The pieces were constructed primarily on the computer via Optitex. We used CLO3D to virtually simulate the garment onto the body in order to see what it would look like before even creating the first prototypes. Before the final fabric was used, a partial top was constructed out of the neoprene to test the structure of the shoulder shaping as well as check the length of the top to ensure that it hits correctly right under the bust.

Overall, this look reflects the stirring and innovative design of the Fall 2019 Comme des Garçons collection in that it emulates its suck-punch quality in subtly while introducing

pragmatic wearability. This look can be worn both as a fashion piece and while working out since the surface design elements and fabric choices do not obstruct movement and allow for mobility. The surface design elements and novel use of mixed materials sets this look apart from other activewear pieces on the market; it is both stylish and practical for the forward-thinking, modern woman.

