Mesh was used at the top of the chest and under the arms to increase breathability in high moisture areas. This is a more closed knit mesh so it will not be too transparent.

A cable detail was used on the front of the garment to create structure, but serve mainly a visual purpose. A center placement was used to accentuate the curves of the body and draw the viewer's eye around the piece.

A 1x1 rib was used on the sides to allow for stretch but also to hug the body in order to create stability.

The word graffiti is derived from the Italian language meaning “scratched.” Today, graffiti is known as “the scratching, scribbling, or painting of walls or other surfaces in public places.” When studying abroad in Shanghai, I frequently explored outer-lying towns and found many pieces of beautiful graffiti art. The inspiration pictured is a photo that I took during these travels. From this photo, I created the leggings in the center as the main statement piece. The leggings on the left features a complimentary pattern that can also be found in the zip-up jacket. The color palette reflects the Active Colour A/W 17/18 trend but also mimics the icy feeling of societies view towards graffiti as vandalism. Not only can these pieces be worn in the way displayed, but they also can be mixed, matched, and layered. Since this knit collection is so versatile, it can be suitable for multiple seasons.
Dew Drops

Dew Drops is an athleisure top that is derived from the concept of incongruent water droplet shapes. Using mesh and links links, this top curves to the body and drapes beautifully to both sides. Shown above are different color ways that can be used. Pattern can also be added for additional visual interest such as the pattern I created above.

<table>
<thead>
<tr>
<th>Mach</th>
<th>Gauge</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x</td>
<td>8</td>
<td>100% Cotton</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16/2 cc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Reactive Dyed</td>
</tr>
</tbody>
</table>
LEFT IMAGE: PROGRAMMED WITH SHIMA SEIKI APEX ONE. KNIT ON SHIMA SEIKI MACH2X 8GG WITH 10/2 100% COTTON. DISCHARGED AND REACTIVE DYED.

RIGHT IMAGE: PROGRAMMED WITH SHIMA SEIKI APEX ONE. KNIT ON SHIMA SEIKI MACH2X 8GG WITH 10/2 100% COTTON. DIGITALLY PRINTED WITH SHIMA SEIKI SIP-160F2L WITH REACTIVE DYE.
CREATED FOR APPALATCH OUTDOOR APPAREL COMPANY

LEFT IMAGE: PROGRAMMED USING STOLL M1. KNIT ON STOLL CMS502 6.2 MULTI GAUGE WITH 30/2 MERINO WOOL.
RIGHT IMAGE: PROGRAMMED USING STOLL M1. KNIT ON STOLL CMS502 6.2 MULTI GAUGE WITH 30/2 MERINO WOOL AND 20/2 TENCEL.

FORD BOWDEN
WABOWDEN@NCSU.EDU
CLOCKWISE FROM TOP LEFT
1. PROGRAMMED WITH SHIMA SEIKI APEX ONE. KNIT ON SHIMA SEIKI SES122FF 12GG.
2. PROGRAMMED WITH STOLL M1. KNIT ON STOLL CMS502 6.2 MULTI GAUGE.
3. PROGRAMMED WITH SHIMA SEIKI APEX ONE. KNIT ON SHIMA SEIKI SES122FF 12GG.
4. HAND KNIT WITH DUBIED V-BED 7GG.
Copper bodice, acid etched pendant, digitally printed pants and shawl

Jackie Almeter
jralmete@ncsu.edu
3-D simulations using the Shima Seiki APEX 3 software, metallic silver nylon wrapped cotton yarn

Jackie Almeter
jralmete@ncsu.edu
Domestic knitting machine 4.5mm gauge
Contour & Cable – Women’s Chic Sweater

This sweater was part of several concepts created and inspired by contour line drawings which emphasize different visual highs and lows through line, guiding the eye around the body. Classic cables are incorporated into a modern design with contrasting textures created by juxtaposed knit structures. Features a modified 2x2 rib turtle neck with raglan sleeve, cables, links-links drawn-in and a basket weave texture throughout the body and on the sleeve.

Simulated Yarn: 4x 20/1 viscose
Simulated using Shima Seiki APEX System
Machine: Shima Seiki Mach-2X (8 gauge)

Rachel H Relyea
rhrelyea@ncsu.edu
Above left: Gold design variation (front)
Above right: Charcoal design variation (back detail)
Right: Model fit simulation with first design

Simulations made in Shima Seiki APEX System

Rachel H Relyea
rhrelyea@ncsu.edu
Chic Watercolor—Slim Sweater Dress

This sweater dress was inspired by the simple and sophisticated slim sweater dress trend and a soft vintage-feel color palette. Applying wholegarment digital printing technology, a handpainted watercolor painting was printed onto the plain ecru knit dress using reactive dye printing. Gold detail was handpainted with Jacquard metallic paints for textiles. Features a 2x2 Rib turtle neck, set in sleeve with 1x1 6” rib cuff. Hem is 1: simple links-links horizontal.

Yarn: 100% Cotton 2x 16/2
Simulated using Shima Seiki APEX System Machine: Shima Seiki Mach-2X (8 gauge)

Rachel H Relyea
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INSPIRATION

Weiqi "Lucas" Zhang
wzhang31@ncsu.edu
Designed with Shima Seiki Apex One System
MACH2x 8 gauge
2 end of 100% cotton 16/2
Stitch length: 10
Wales: 64 stitches/4 in
Courses: 96 stitches/4 in
ACTUALIZATION

Weiqi "Lucas" Zhang
wzhang31@ncsu.edu
ACTUALIZATION

Weiqi "Lucas" Zhang
wzhang31@ncsu.edu
INSPIRATION

LOVE

SPEED

Target Market
Young Lovers 18 – 25

Features
Modular Structure
On-Skin Comfort
Quick Drying
ACTUALIZATION

- Integral Knitting
- Programmed with Shima Seiki Apex One System
- Knitted on MACH2X-173 15 gg
- Stitch length: 7.5
- Yarn Information:
  - 20 D Span AC 1/150/96 Black & White
  - Trilobal Shaped Fiber
  - Cool Wick
- Wale Size: 80 stitches/4 in
- Course Size: 112 stitches/4 in
ACTUALIZATION