



Higher Institute  
of Arts and Crafts  
of Sfax



## ISAMS / USF Innovation textile center's Objectives

The innovation textiles' center will open up a direct channel for contact between individuals (staff of the center, designers, researcher, managers and technicians from Tunisian textile companies) in order to boost cooperation and collaboration to thrive innovation in the sector.

This center is dedicated to the textile and fashion design phases, and focusing on digitalisation in textile and clothing design.

### Equipments' list

- **3D simulation solution:**
  - Cabin of 3D body scanner,
  - Fabric scanner,
  - 3D Simulation software.
- **Sublimation Printing machine.**
- **Digital embroidery machine.**
- **Automatic Knitting flat machine.**
- **Multifunctional machine :**  
(3D Printing, Laser cut, CNC Engraving).
- **C02 Laser engraving cutting machine.**

### Team

The ISAMS / USF textile innovation center will involve a multidisciplinary team which is a Fusion of :

- Textile clothing Design / industry,
- Cluster development strategy in the Sfax,
- Entrepreneurship strategy,
- Arts, culture and design strategy,
- Environmental sustainability strategy.

### ISAMS / USF Innovation center Address

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<https://goo.gl/maps/oY6IX7xRgUpSbAPC9>

[www.wintexproject.eu](http://www.wintexproject.eu)



## PARTNERS



TEXTILE INNOVATION CENTERS



## Weaving innovation among academia and industry in the Tunisian textile sector



### Innovation Center ISAMS / University of Sfax

Higher Institute  
of Arts and Crafts  
of Sfax



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## Objectives of the Innovation Center at the University of Sfax / ISAMS

- Reduction of the design time by 3D simulation.
- Reduction of raw materials and products consumption to meet the sustainability principles and standards.
- More responsiveness and more competitiveness (artists, fashion designers, textile designers, industrials and creative professions).
- Fostering participation of students in innovation with real case studies and active participation in internships.
- Developing skills and competencies that are needed by the market.

### About services

- Information about new technology trends in the fashion sector,
- Training in innovative and eco-Friendly manufacturing techniques,
- Identification of innovative methods of organizing production,
- Proposal of ways to reduce production costs and increase productivity,
- Development of quality products,
- Information about investment and funding opportunities in the creative industries,
- Support and training for students wishing to innovate in the field of textiles/clothing,
- ...

### Targeted competences

1. Develop and present from idea to project: research, concept creation and visualization.
2. Translate ideas and vision into concrete end products that are related to new technology for fashion.
3. Use knowledge of traditional craftsmanship for garment realization in 3D virtual prototyping.
4. Build knowledge of the most contemporary new technologies in fashion and developing ideas on sustainability from design to end product.

# Equipments

## 1 3D simulation solution

### 1.1 Cabin of 3D body scanner / Digitize the body

- 3D body scanner. The body scan is completed in 3 seconds.
- Uses 18 human-safe IR sensors to collect 3D points on the body surface.
- No photos or videos are taken; ensuring consumer privacy is respected.



### 1.2 Fabric scanner / Digitize the fabric

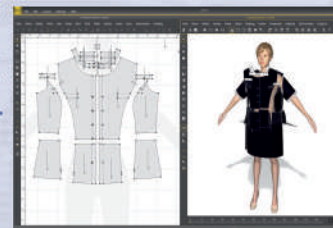
- Intelligent imagery processing engine that captures 3D texture display properties of fabrics and automatically captures the physical dimensions of fabric's pattern to match the real fabric's appearances.
- Instant 3D fabric previews.
- Swap the entire selected color with a new color to generate a brand new digital fabric and explore new fabric color pairings.
- Create custom fabrics libraries.



### 1.3 3D Simulation software / Digitize the Accessories, Patterns & Garments

3D fashion design software that enables designers and pattern makers to work on their creative projects and instantly review changes as a simulated 3D garment.

In this way, the best silhouette and fit can be achieved without having to make up real samples in early stages for the design.



## 2 Sublimation Printing machine

Machine of printing paper and machine of transfer of the printed paper graphics on fabric.

#### Applications :

Design new graphics, corresponding to the trend and print them.



## 3 CO2 Laser engraving cutting machine

Equipped with a CO2 laser tube, the laser cutting machine can process, textile structure, acrylic sheets, plastic boards, wood boards and other non-metallic materials.



Adoptable for clothing tailoring, embroidery cutting, leather punch. Honeycomb or Strip work table, which meet the needs of diversified laser procession. An additional support for cylindrical structures is also proposed.

## 4 Digital embroidery machine

Machine embroidery on finished garments, textile fabrics,...

Color LCD screen showing the seams in real time.

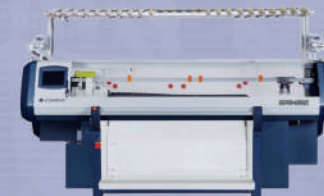


## 6 Machine multifonctionnelle (Laser ; Gravure CNC)

## 5 Automatic flat knitting machine (With knitting design and programming software)

Weft knitting design, to create new custom flat knit structures.

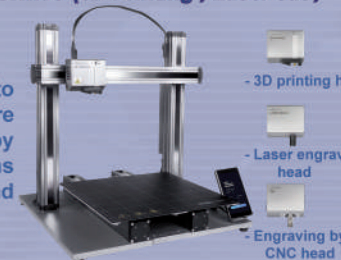
The machine realizes multi-segment stitch knitting in the same line with dynamic stitch function by using digital technology to make patterns of irregular and regular structures.



- Working width : 52 inches
- Gauge 12

## 6 Multifunctional machine (3D Printing ; Laser cut ; CNC engraving)

Fashion accessories design, to design and realize cloth furniture such as personalized buttons by using the 3 equipment functions (3D print, CNC engraving and Laser Cutting).



- 3D printing head
- Laser engraving head
- Engraving by CNC head