

## Design\_LAB

<p><b>Principal Investigator:</b> Prof. Alessandra CIRAFCI</p>
<p><b>Responsible for teaching and research activities in the laboratory (R.a.d.o.r.):</b> Prof. Alessandra CIRAFCI (proposed at the CdD of 13 February 2020).</p>
<p><b>Location:</b> The Laboratory Design-LAB is located at the headquarters of DADI and precisely on the ground floor of the volume adjacent to the abbey complex of San Lorenzo.</p>
<p><b>Main Laboratory Activities:</b> The Laboratory Design-LAB carries out activities to support teaching, experimental studies and scientific research. The working group operating in the laboratory is made up of lecturers, contract staff, assignees and PhD students who are interested in the themes of design and fashion product development. For activities related to didactics, the Laboratory is aimed at enriching the learning experience of the students of the Study Course in Fashion Designers and of the master's degree Course, combining the technical knowledge of the fashion sector with the more specifically industrial ones. Expanding the students' knowledge through training studies and practical experience allows future designers to master the latest CAD/CAM technologies for the design and development of fashion products, through enabling digital competences, thus facilitating their insertion into the world of work. Through the laboratory activity, from the first creative idea to the final product, the student designers will be able to deal with every phase of the design process. The Laboratory is equipped with hardware and software technologies able to provide advanced functions of: - creation, size development and mass production (2D); - interactive creation of placings; - creation of textile collections: freehand drawing, colour patterns, association of styles, colours and materials, storyboarding and technical drawing; - creation of three-dimensional models and animations for the digital simulation of the fashion show. The local Laboratory is served by a dedicated LAN network that connects the server to ten workstations for the students.</p>



Workstation and Plotter LECTRA



Kniterate 3D Knitting Machine

**Main Equipment:**

- Lectra Plotter model S120AT for digital pattern placement;
- Lectra board model DB6 3648 Digitizing paper patterns;
- Server type DELL PowerEdge R630 interface between hardware peripherals and data processing workstations;
- n.10 Workstation for two-dimensional data processing, raster, 3D modeling and animation;
- MS SQL Server (Network database management software);
- MdPGS 3D (Software for creation, size development and mass production. Fitting check, style validation and collection review);
- MGS (Software for the interactive realization of placements);
- Kaledo Style (Software for creating textile collections);
- CLO3D (2D and 3D design and modeling software for fashion design);
- Marvelous Designer (Animation and photorealistic simulation software for fashion design);
- Rhinoceros 6 (Surface and solid vector and parametric solid modeling software);
- Kniterate 3D Knitting Machine (N.1 Kniterate 3D Knitting Machine (macchina digitale per maglieria));
- GODOX KIT FLASH SKII 400W (kit of stand lamps and backdrops for indoor and outdoor mini photo sets).

**Associated Research Groups:**

- Sustainable industrial design SIDE

**Reference Scientific Subject Areas:**

ICAR/ 13, ICAR/ 12, ICAR /17, BIO/01, ICAR/10, ICAR 18/ M-PSI/08/ SECS-P/08, CHIM10

**ISI WEB categories:**

- Engineering Industrial;
- Art & Architecture;
- Materials Science, Multidisciplinary;
- Literary Theory & Criticism;
- Social Sciences, Interdisciplinary.

**ERC categories:**

- PE6\_8 Computer graphics, computer vision, multimedia, computer games;
- PE8\_11 Industrial design;
- SH2\_10 Communication networks, media, information society;
- SH5\_5 Visual and performing art, film, design;
- SH5\_7 Museums and exhibitions;
- SH5\_9 History of art and architecture;
- SH5\_11 Cultural heritage, cultural memory.

**Key words:**

Sustainability, Innovation, Fashion System, Visual Communication, Advanced Textile, Design for Cosmetics, Bio innovation, Branding.