Regulations

Access to Fab Lab

SAPeri&Co
Sapienza Enhances Research
Innovation and Coworking

SAPIENZA
UNIVERSITÀ DI ROMA

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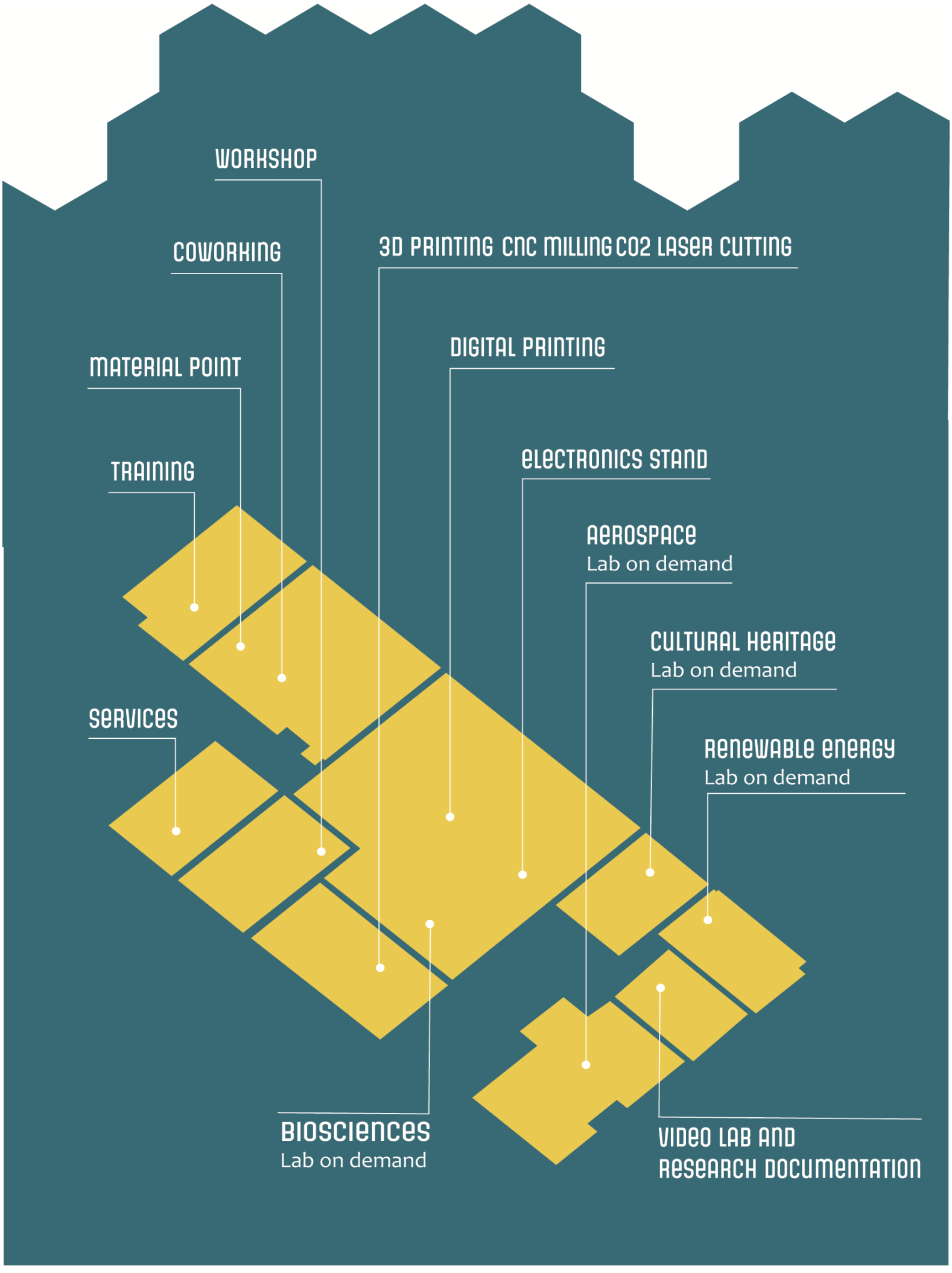
This regulation defines the duties of the users of the Fab Lab SAPeri & Co with the aim of ensuring the rights of use in respect of staff, places and machinery.

It also illustrates:
- the main activities of the laboratory;
- the rules of access to premises and machines;
- proper and correct use of the machines;
- the operational and safety procedures to be followed;
- the tasks of human resources structured in the laboratories;
- disciplinary rules for the correct use of spaces and machinery;
- registration procedures and types of users to use the laboratory services.

All the points of this document have been developed and integrated to better respond to the specific purposes of the Fab Lab SAPeri & Co.


WORKSHOP
COWORKING
3D PRINTING CNC MILLING CO2 LASER CUTTING
MATERIAL POINT
DIGITAL PRINTING
TRAINING
ELECTRONICS STAND
AEROSPACE
Lab on demand
CULTURAL HERITAGE
Lab on demand
SERVICES
RENEWABLE ENERGY
Lab on demand
BIOSCIENCES
Lab on demand
VIDEO LAB AND
RESEARCH DOCUMENTATION

... A center for technology transfer

SAPeri & Co is a research and services infrastructure of the Sapienza University of Rome created to promote the excellence in applied research of the largest university in Europe and to offer services dedicated to companies and external bodies.

SAPeri & Co aims to activate and stimulate synergies:

internally at the University
- supporting researchers in accessing interdisciplinary activities, and cutting-edge equipment
- accompanying students to enter the world of work through the creation of useful activities to encourage opportunities for direct contact with the world of companies

outwards
- creating a meeting and exchange ground between the world of excellent public research and that of entrepreneurship
- making state-of-the-art equipment and know-how available to companies and public and private bodies in various research fields

A large infrastructure for Research, Innovation and Training, which, according to the European model of Research Infrastructures, aims to encourage the multidisciplinarity of knowledge and skills; assist innovation and technology transfer; activate collaboration between academia and the business world; stimulate the creation of new entrepreneurships; enhance the excellence and values of Sapienza at national and international level; systematise the network of laboratories and skills of the largest university in Europe.

The equipment available in the Fab Lab is classified below in levels based on the complexity of operation and safety:

Level 1, green badge: equipment accessible in partial autonomy by all members who have passed the initial training phase, always under the supervision of the technicians of the Center

Level 2, yellow badge: equipment accessible only by expert users or by the technicians of the Center

Level 3, red badge: equipement accessible only by the technicians of the Center

ADDICTIVE MANUFACTURING

Delta Wasp 4070

Tecnologia
FDM (Fused Deposition Modeling) 3D printing

Lavorazioni
Stampa 3D

Area di lavoro
40x40x70 cm

Materiali
PLA, ABS, nylon, polimeri elastici, polistirene, Laywood

Risoluzione X/Y
12 micron

Risoluzione Z
5 micron

Delta Wasp 2040 turbo

Tecnologia
FDM (Fused Deposition Modeling) 3D printing

Lavorazioni
Stampa 3D

Area di lavoro
20x20x40 cm

Materiali
PLA, ABS, nylon, polimeri elastici, polistirene, Laywood

Risoluzione X/Y
12 micron

Risoluzione Z
5 micron

IRA3D Poetry 360

Tecnologia
FLD (Fast Layer Deposition) 3D printing

Lavorazioni
Stampa 3D

Area di lavoro
25x25x30 cm

Materiali
PLA, ABS, nylon, Soluble, Medical, IRA-Bronze, IRA-Wood, IRA-Carbon, IRA-Copper, ABS-Super

Risoluzione X/Y
50 micron

Risoluzione Z
15 micron

Zotrax M200

Tecnologia
LPD (Layer Plastic Deposition) 3D printing

Lavorazioni
Stampa 3D

Area di lavoro
20x20x18 cm

Materiali
Z-ABS, Z-ULTRAT, Z-HIPS, Z-GLASS, Z-PCABS, Z-PETG

Risoluzione X/Y
1,5 micron

Risoluzione Z
1,25 micron

Formlabs Form 2

Tecnologia
SLA (Stereolithography Apparatus) 3D printing

Lavorazioni
Stampa 3D

Area di lavoro
14,5x14,5x17,5 cm

Materiali
Resina metallica

Risoluzione X/Y
25; 50; 100 micron

DigitalWax XFAB2000

Tecnologia
SLA (Stereolithography Apparatus) 3D printing

Lavorazioni
Stampa 3D

Area di lavoro
18 cm di diametro

Materiali
Gamma Invicta 3 (simil ABS grigio e bianco, simil polipropilene), Flexa 2 (simil gomma nera e trasparente), Vitra2 (acrilici color ambra e trasparente), Precisa 779 (grigio opaco), Therma 289 verde (simil nano ceramica per resistenza termica), Vesta 443 (simil cera)

Risoluzione Z
da 10 a 100 micron

SUBTRACTIVE MANUFACTURING AND 3D SCAN & MODELING

Valmec Falcon 1500

—

Tecnologia
Fresatrice CNC

Lavorazioni
Taglio, profilatura, incisione 2D e 3D

Area di lavoro
150x120 cm

Materiali
Legno, plastica, poliuretani espansi, metalli teneri

Birio 1000

—

Tecnologia
Laser Cut and Engrave CO_2

Lavorazioni
Taglio e incisione 2D

Area di lavoro
100x60 cm

Materiali
Legno, compensato, sughero, acrilico, policarbonato, tessuti naturali, carta e cartone, cuoio, pelle, MDF, PETG, Delrin®, nastro Kapton, Mylar, Depron, Gator, fogli magnetici, gomma, Teflon, fibra di carbonio, polionda, vetro in lastre, piastrelle in ceramica, alluminio anodizzato, marmi, pietre dure

Roland Versacam SP540I

—

Tecnologia
Plotter

Lavorazioni
Stampa 2D, incisione, taglio

Area di lavoro
L 137 cm

Materiali
Termotrasferibili, cartoncino, Sandblast, carta, microforato, banner PVC, tela, PVC adesivo

Shining 3D Einscan-Pro

—

Tecnologia
Luce strutturata

Lavorazioni
Scansione 3D di oggetti

Touch 3D stylus

—

Tecnologia
Haptic device

Lavorazioni
Modellazione 3D

Godox SL60

—

Tecnologia
Illuminatore luce LED

Lavorazioni
Illuminazione foto e video

Sony Alpha 7R II

—

Tecnologia
Fotocamera Mirrorless a lenti intercambiabili

Lavorazioni
Fotografia

... FAB LAB

The Fab Lab SAPeri & Co Lab, by open access vocation, promotes the use of open source resources and aims to be full share, or to share the results in order to speed up sustainable social and cultural development.

SAPeri & Co Fablab, is a laboratory-workshop and experimentation center dedicated to new digital manufacturing technologies and innovation of production processes, equipped with advanced machinery. The goal of SAPeri & Co is to promote research, development, training and technology transfer activities in the field of advanced manufacturing at a multidisciplinary level.

The services offered by FabLab SAPeri & Co are managed through a dedicated online booking service and governed by these Regulations.

... ACCESS MODE

Access to the SAPeri & Co FabLab is allowed for a maximum of n. 25 users simultaneously and subject to the issue of an electronic access membership card, which will be issued at the Center itself.
The use of the Center's equipment and materials is reserved for registered users only and according to two types of users:

• Sapienza users, students, PhD students, researchers, teachers and laboratory technicians in Sapienza in good standing for the administrative part, profiled for their skills and adequately trained on the use of machines and safety in the workplace.
Specifically, researchers and teachers can:

- book the use of the equipment and instruments of the Fab Lab and Workshop space according to the current tariff (* the costs for materials are borne by the user)
- collaborate in the activities of colleagues from other scientific sectors, thus activating profitable exchanges between "knowledge" and disciplines

• Guest Users, employees or persons in charge of external subjects such as companies, organizations and associations, authorized to access on the basis of a planned research collaboration activity with the Center and admitted to the premises in conjunction with events or particular projects without access to equipment
Specifically, external subjects can:

- request support activities for the development of innovative ideas, taking advantage of Sapienza's know-how and using the sophisticated equipment available in SAPeri & Co and in the Network laboratories
- propose and promote partnership initiatives such as experimental research, training activities, seminars, workshops and hackathons

... GENERAL RULES FOR USERS

Access to the equipment is subject to specific user training both as regards the current safety regulations and as regards the use and operation of each machinery. This training will be provided by the Sapienza structures.
The use of the machines will also take place under the supervision of a Technical Manager and must be requested through the online booking system.
The user will have the obligation to comply with the provisions of this regulation and in particular must:

- fulfill the training required by current legislation on security and on Sapienza's personal data
- wear personal protective equipment as indicated by the specific information placed near the machines
- make sure you have correctly prepared the machines and materials suitable for the processes
- promptly report to the Technical Manager any anomaly, damage or malfunction of the machines and equipment of the Fab Lab / Workshop
- take care of your personal belongings (staff and management will not be responsible for any damage or theft)

••• SERVICES PROVIDED

The SAPeri & Co center aims to provide the Sapienza Community with a hub for meeting and realizing ideas through the development of physical prototypes and research projects, through the use of digital manufacturing technologies.

Users must comply with the indications included in these regulations and will be supervised by a Technical Manager.

The activities of FabLab SAPeri & Co are managed through a dedicated online booking service where you can finalize:

- request for use of machinery
- request to use the workstations (equipped with pc, wi-fi network, projector, Lim, etc.)
- registration for the Centre's activities (workshops, hackathons, training, events, etc.)

Each service provided requires users to participate in the costs of purchasing the material. These expenses are quantified by the user on the basis of the indications provided for each machine and quantified in the booking phase (any excess hours will be set aside for subsequent processing) on a flat rate in € / h machine. The time dedicated by users to training and transmission of knowledge to other users within the laboratory, will be able to constitute a mountain of hours of credits to be spent on processing.

The FabLab staff will provide users with consultancy activities for evaluating the feasibility and development of an idea up to the realization of the prototype and in particular:

- Evaluation of the techniques and technologies necessary for the realization
- Choice of materials and any mechanical and electromechanical components
- Treatments to improve performance and material protection
- Sizing of the parts
- Optimization of the CAD drawing for the realization of the parts with technologies available in the FabLab or with the other laboratories of the SAPeri & Co network

Thanks to the integration with the ASURTT offices of Sapienza, the Center will be able to support users in the patenting phases, development of innovative business ideas and their insertion in the pre-incubation, incubation, acceleration and start-up creation process.

••• GENERAL SAFETY RULES

Access to the laboratory and to the workstations is reserved only to those entitled according to the provisions of this regulation. Users are required to strictly comply with the rules listed below:

- smoking and the use of open flames in laboratories is prohibited;
- it is forbidden to leave objects, bags or anything near the emergency exits or along the marked escape routes; the objects owned by users, which are not necessary to carry out the project, must be stored in the appropriate wardrobe room;
- it is mandatory to comply with the specific safety and operating standards for each workstation and the laboratory in general;
- it is forbidden to tamper with the equipment and carry out maneuvers that can cause damage and dangerous situations to themselves and to other users;
- it is forbidden to use the equipment without having received adequate training (levels 1 and 2);
- it is always forbidden to use level 3 machinery independently;
- it is mandatory to use machines and tools appropriately;
- it is mandatory to use the personal protective equipment (PPE) supplied with each equipment;
- it is mandatory to take care of and keep the PPE supplied;
- it is mandatory to report any damage and / or malfunction of tools and equipment to the managers;
- it is forbidden to use tools and equipment that are recognized and reported as damaged, malfunctioning or without their own safety devices.

... TASKS OF THE TECHNICAL MANAGERS OF THE FAB LAB

The figures responsible for the technical and operational functioning of the spaces and equipment of SAPeri & Co. Are the FabLab Manager and the Technical Manager.

The Fablab Manager is the Technical Director of SAPeri & Co. FabLab, and he is the person in charge of / RADL for safety, taking care of managing the premises, machines and supplies and laboratory activities, including the timing of the processing and use of the machinery.
His main duties are:

- responsible for opening and closing the laboratory;
- laboratory safety manager
- management and organization of laboratory activities;
- management of supplies of materials;
- control over access to laboratory spaces and the use of equipment according to the operating and safety standards of this regulation.

The Technical Manager is the general manager of the laboratory as well as the manager of the use of equipment, tools and machinery.
His main duties are:

- ordinary maintenance of machines and tools;
- supervision of the use of the machines and their reservations
- inventory management and consumables warehouse;
- initial tutoring and user support.

The duty of the structure is to provide for the protection of the safety and health of workers (Legislative Decree 81/08). The safety manager is identified in the figure of the Fablab Manager

... TASKS OF FAB LAB USERS

The users of the Faberi SAPeri & Co Lab are equated for safety, workers and therefore must carry out a basic course on safety and the correct use of spaces for new ones provided free of charge by Sapienza to train and inform the exposed subjects on the risks and measures of prevention and protection that must be adopted (Legislative Decree 81/08, art. 6 DM 5 August 1988, n. 363). The course is communicated through the main communication channels (website, newsletter, email, bulletin board).

... ACTIVITIES TO BE CARRIED OUT SAFELY

The autonomous use of each instrument within the SAPeri & Co FabLab is subject to the user's authorization levels according to the criteria established by the laboratory itself. In any case, the following activities must be carried out paying particular attention to the safety conditions established and available in the infographics on the correct use of the machinery and processing materials present in the laboratory and online, in order to avoid damage to people and objects:

- Activities at risk of drilling, cutting, puncture, shearing and drilling (milling, laser cutting, grinding, use of drills, screwdrivers, circular saws, hacksaws, cutting boards and scalpels, cutting plotters)
- Activities at risk of entanglement, entrainment and entrapment (printing and cutting plotter
- Activities at risk of abrasion and scalding (laser cutting, welding, 3D printing, grinding, thermoforming, use of the heat press, plastic folding, mold ovens, and all activities involving a melting of materials)
- Activities at risk of electrocution (welding of electrical circuits, prototyping of electronic boards, use of LEDs, robotics)
- Activities at risk of emission of dangerous substances (milling, laser cutting, 3D printing, thermoforming, heat press, welding, grinding)
- Activities at risk of crushing (sheet bending, use of the heat press)
- Activities at risk of noise or vibrations (sanding, sanding, sandblasting)
- Activities at risk of radiation emission (use of laser scanner)

... USE OF PROTOTYPES AND NEW PRODUCTS

The use of prototypes of machines, appliances and work equipment, of plants or technical means made and used in research, teaching and service activities is subject to the correct protection of personnel, by evaluating the possible risks associated with the realization of the project and with the adoption of any specific precautions, based on the available knowledge.

Operators must be adequately trained and informed on particular risks and on particular prevention and protection measures.

... DISCIPLINE AND BEHAVIORAL RULES. DUTIES OF MEMBERS

Users who have access to laboratories and equipment are required to maintain the state of the places.
At the end of the work, it is mandatory to return tools, materials, containers of consumables and in any case all the things that have been used for the project.
Workstations for used tools must be cleaned properly. Users are required to properly dispose of ordinary waste.
Any damage, problems, theft, as well as the exhaustion of consumables, must be promptly communicated to the laboratory manager.
For no reason, users can take materials, tools and consumables stored in the lockers with a key.
The user also responds personally to the integrity of the tools that have been entrusted to him and to the possible removal of the same.
It is forbidden to leave your work in the laboratories except for the time strictly necessary for their completion; in any case it is not allowed to leave the premises without first having correctly stored the tools, materials and creations of one's work. The responsibility for the theft of personal objects or project components lies with the users.
In the spirit of sharing skills and knowledge, users are warmly invited to an active peer tutoring, to the drafting of written notes, the integration of instruction manuals and use of the equipment, of operating schemes for procedures and of everything that can favor and increase the synergies between users and increase the potential of human and technological resources belonging to the laboratory.

... REVOCATION OF ACCESS TO THE LABORATORY

The use of equipment and access to the laboratory can be revoked following deficiencies, defaults and serious irregularities.

Access to the laboratory and infrastructure of SAPeri & Co. can be revoked in case of:
- inappropriate disturbing behavior during training, study, research, planning and administrative activities;
- damage and / or vandalism towards objects and / or people;
- violent and / or offensive attitudes towards people, including racist and discrimination attitudes;
- perpetual failure to comply with safety standards during the performance of its activities

... TARIFF

- 3D filament printing
- Stereolithography
- CNC milling machine (Valmec Falcon 1500)
- Laser cut (Birio 1000)
- Plotter (Roland Versacam SP540I)
- Structured light (Shining 3D Einscan-Pro)
- Touch device (Touch 3D stylus)
- Camera (Sony Alpha 7R II)

...MEMBERSHIP

PREMIUM FAB LAB + COWORKING
100h
€ 4500*
Included at choice (to be specified at the time of subscription)

20h coworking or 10h fablab* or free file assistance

STANDARD FAB LAB		
10h	20h	30h
€ 450*	€ 880*	€ 1200*
+10h free coworking		

STANDARD COWORKING		
10h	20h	30h
€ 50	€ 90	€ 120
+ 5h 3d printing / plotter / lasercut in the fablab for free *		

... FAB LAB PACKAGES

3D PRINTING		
5h	10h	20h
€ 50	€ 95	€ 190

CNC MILLING MACHINE		
5h	10h	20h
€ 450	€ 880	€ 1600

LASER CUT		
5h	10h	20h
€ 450	€ 880	€ 1600

PLOTTER		
1h	3h	5h
€ 30	€ 80	€ 120

ASSISTANCE

10€/h

* Rates do not include the cost of materials

••• PRIVACY POLICY

The data provided will be processed in compliance with the provisions of Legislative Decree of 30 June 2003 n. 196, according to the principles of correctness, lawfulness and transparency and to protect the privacy of the interested party who retains the rights referred to in art. 7 (access, cancellation, rectification, opposition etc.).
The data controller is Sapienza University of Rome.
The Data Processor is the Director of the SAPeri & Co. Center.

••• INFO AND OPENING TIMES

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