MAKERSPACE SAFE WORK POLICY, PROCEDURES AND PRACTICES

MAKERSPACE SAFE WORK POLICY
It is the expectation of UC Berkeley and the EECS Department that:

▸ Only persons who are “Authorized” by a Shop Manager / Supervisor may enter and work in restricted areas of the makerspace unescorted and/or use restricted equipment unsupervised.

▸ A person becomes “Authorized” as indicated by need of their work duties, and approval from the Student Management Body combined with a Lab Manager’s agreement that they possess the training and qualifications for safe work in the shop. This is documented using Attachments 1 and 2 of the Shop Safety Program.

▸ Lab Managers define and maintain “Restricted Equipment” within the makerspace that only “Authorized Persons” may used unassisted.

▸ Lab Managers determine the appropriate safe-work training needs for their shop, and assure that all “Authorized Persons” in the makerspace have received the orientation and training to the makerspace.

▸ UCB has, and all Makerspaces must support, a Stop Work Policy when unsafe work is witnessed. It is the responsibility of everyone to exercise this policy when observing unsafe work conditions or practices. If you see unsafe behavior or activities, don’t hesitate to use the Stop Work Policy and immediately speak up and stop unsafe work.

▸ UCB Shops and Makerspaces comply with CalOSHA regulations, the California Electrical Code and other established safety standards by applying this and other EH&S safe-work Programs / Policies as listed in the “Typical Shop Hazards and their Controls” section of the “UC Berkeley Shop Safety Program” on the EH&S website.

▸ All electrically energized shop equipment is used in a safe manner as intended by the manufacturer and within the equipment’s Nationally Recognized Testing Laboratory (NRTL) listing.

▸ All makerspace personnel must resist “hurry-up” pressure and work methodically and safely. Take the time, and get the help needed to do a job the ‘safe way’.

SAFE WORK PROCEDURES
USE OF PERSONAL PROTECTIVE EQUIPMENT (PPE)
Based upon hazards that are present, the following PPE must be worn when working in a “Restricted Area” or using any “Restricted Equipment:

▸ Whenever powered equipment or hazardous substances are present, appropriate face and/or eye protection must be worn.

▸ Gloves and other hand protection must be selected and worn based upon hazards. Use EH&S’s Glove Selection Guideline for ideas on what kinds of gloves should be worn based upon hazards.

PERSONAL SAFETY and WORKING SOLO

▸ Open-toed shoes, flip-flops, shorts, sandals, scarves and loose-fitting clothing are NEVER worn in any makerspace restricted area.

▸ Long and medium length hair must be tied back and put into a bun or inserted under a shirt-collar, or put under a hair-net, when working near sparks, flames, or any rotating powered or other entangling equipment.

▸ Shop access outside of supervised hours may be restricted to specific “Authorized Persons” based upon the Lab Manager’s discretion. This access is not granted for regular on-going work. Routine working solo outside of ‘supervised hours’ is strictly forbidden and will result in an immediate revocation of shop privileges.

▸ “Authorized Person(s)” may not work solo in a Makerspace unless a specific exception has been made on a case by case basis upon communications means and / or other arrangements outlined in the Supernode Management Document. In the event that an exception has been made, it is the responsibility of the Authorized Person to communicate with a Lab Manager / Supervisor and outline a procedure to assure the person’s continuous safety and ability to communicate immediately with emergency responders prior to solo-work starting.
University of California at Berkeley – Makerspace Safety Policy
Supernode Student Makerspace

EQUIPMENT OPERATION
The operation of any and all shop equipment requires prior training and approval by the Lab Manager / Supervisor. Only persons authorized by the Lab Manager / Supervisor and trained in the safe operation of the shop equipment are permitted to work in a shop and operate shop equipment. A signed “Authorization Form” certifies this level of qualification and must be on file with the Lab Manager / Supervisor. Failure to adhere to this requirement will result in a loss of makerspace usage privileges.

SHOP SAFE-WORK PRACTICES

ELECTRICAL SAFETY: All work on and development of electrical equipment must be conducted according to guidelines and compliance requirements set by UCB’s Electrical Safety Program. Work that must be done on energized electrical circuits must be done in accordance with the “Hot Work Permit” procedure detailed in this program. Otherwise, work on electrical equipment must be done verified de-energized and locked / tagged out by all persons working on the equipment.

ENERGY ISOLATION – LOCK OUT TAG OUT: Know and apply the UCB Energy Isolation / Lock Out – Tag Out Program to all facility and equipment locations in the following conditions:
▸ When unfamiliar with a machine, its energy sources and how to safely isolate them,
▸ Where hazardous energy release could cause unexpected movement of equipment,
▸ Where unexpected flow of energy could cause injury or equipment damage,
▸ Whenever a machine-guard or interlock is removed or bypassed, or
▸ Whenever there is more than one energy supply to a machine, and the energy source cannot be simply ‘unplugged’ so that energy control is exclusive to the person working on/with the equipment.

EQUIPMENT, FACILITY AND MATERIAL HAZARDS
▸ Always consider electrical equipment or compressed gas equipment “energized” until positively proven otherwise.
▸ Learn and know how to shut down equipment in an emergency BEFORE there’s an emergency.
▸ Design and plan for safety by looking for hazards and anticipating problems.
▸ Whenever possible de-energize the equipment before testing or working on it.
▸ Positively ensure all hazards are identified before blocking, blinding, bleeding or conducting lockout and tagout.
▸ Always block mechanical equipment to assure it cannot move before removing or bypassing any machine guard.
▸ NEVER reach beyond any machine guard until you have blocked and verified the machine stopped.
▸ Lock out and Tag out broken, mothballed or unsafe equipment until it can be repaired or permanently removed.
▸ Refer to the Makerspace’s Hazard Communication “Orange Flip Chart” and Material Safety Data Sheets (MSDS) to understand material / chemical hazards.

HAND TOOLS: Only persons authorized by the Lab Manager / Supervisor and trained in the safe use of hand tools are permitted to use this equipment. Use hand tools and devices only as they were designed / intended to be used.

HOUSEKEEPING: The work and surrounding area in which you are working must be kept neat, clean and safe at all times. If you see a mess, spilled liquid or debris, whether you created it or not, take the time to clean it up.

JEWELRY: Remove all jewelry before working in a “Restricted Area”.

WORK BRIEFING: Participate in a safe work briefing with all personnel in the area before commencing any shop work. Assure you discuss planned work with the Lab Manager / Supervisor, or their designee, to identify any hazards or other hazardous conditions nearby due to work being done by others. Know the Makerspace’s emergency procedures. Maintain the protection of covers, barriers and shielding of all electrical equipment, hot work, machine guards, chemical storage, etc. Never drill into a wall or floor slab without Shop Manager and Building Manager approval.
I have read, understand and been given a copy of UC Berkeley’s “Makerspace Safety Policy” as well as the Supernode “Makerspace Usage Rules”. I pledge to only conduct work according to the safe policy and procedures outlined within the contents of the Makerspace Safety Policy and follow all rules outlined in the Makerspace Usage Rules document. I understand that failure to follow policy and procedures outlined within the Makerspace Safety Policy or Makerspace Usage Rules document may result in immediate expulsion and possibly permanent revocation of privileges to work in the shop. In addition, other disciplinary action may be brought by the department and/or UCB management for failure to follow this policy and procedure.

MAKERSPACE LOCATION: 246 Cory Hall

Signature: X
(Date: __________________________
(Print name: __________________________)
(Status (Circle one): Grad / Undergrad / Visitor / Faculty / Staff

Student ID#: __________________________
Card Key #: __________________________
email: __________________________

Signature: X
(Date: __________________________
(Print name: __________________________)

(Lab Supervisor / Manager)