PROTOTYPING FACILITY @ QUALCOMM INSTITUTE (CALIT2)

GENERAL SAFETY GUIDELINES

The Prototyping Facility is committed to the highest possible safety standards. It is our goal to operate the facility in a manner that ensures that no unacceptable risks exist for all persons operating within the space. Safety is the responsibility of everyone. We require strict adherence to all applicable Federal and State health and safety regulations, and will enforce these as necessary.

BASIC SAFETY

1. Users must have active membership to the Prototyping Facility.
2. Long hair, long sleeves and necklaces must be well secured.
3. Appropriate PPE must be used while handling chemicals, resins and epoxies.
4. Before using any tool, users must receive qualified instruction on proper use. Only use a tool if you possess the required knowledge, capabilities and skills to safely, responsibly and expertly operate it.
5. All safety instructions, either posted in the lab or documented on the website must be honored by all users.
6. If something does not sound, look or feel right, users should stop and recheck the setup. Use proper tool speeds and feed rates.
7. Working with machines, tools and materials requires concentration. If users are tired or otherwise compromised they should leave the shop and rest up.
8. Users must immediately report any safety concerns, emergencies, and/or equipment damage.
9. Users most know where the fire extinguishers, main power switches, circuit breakers, water faucets, emergency eyewash and safety checklists are located.
10. Users must be aware of their surroundings and all applicable safety precautions, for themselves and for others.

SOLDERING

1. Users are only allowed to solder if they have been trained and proficient, either through a class or past training.
2. Users must follow the Soldering Safety Guidelines (separate document).
3. Only use a soldering iron if you possess the required knowledge, capabilities and skills to safely, responsibly and expertly operate it.

MACHINE SHOP

1. No one is allowed to work alone in the machine shop.
2. Users must always wear safety glasses while in the machine shop.
3. Long hair, long sleeves and necklaces must be well secured. Loose clothing should not be worn.
4. No open toed shoes are allowed in the machine shop.
5. Unless you have received machining training from the Prototyping Facility and passed the Prototyping Facility machining test, an authorized and trained employee of the facility must be present in the machine shop with you.

MACHINE USE

The safety policies regarding machine use relate to all machines in all Prototyping Facility lab spaces. These machines include all CNC machines (mills and gantry routers), laser cutter, saws, drill presses, and 3D printers.

1. Users need to be approved for each of the machines they use. Before being allowed to operate a specific machine, written or email authorization needs to have been received from a staff member of the Prototyping Facility.
2. Users are only allowed to operate a machine during the times and days that authorization is valid for.
3. Users must follow the Machine Safety Guidelines (separate document), and possess the required knowledge, capabilities and skills to safely, responsibly and expertly operate the machine.
4. No one is allowed to be alone in the room when operating a machine (except for the laser cutter and 3D printers).
5. Give the work your undivided attention.
6. A workspace must be kept clean and uncluttered during and after machine use.
7. Users should not wear anything on their hands, fingers, or forearms (including long sleeves or gloves) while operating machinery.
8. Users should not perform any type of work or use any equipment in any way for which they have not been approved.
9. Users need to familiarize themselves with the specifications and operation manual of a machine before using it, including (but not limited to) those described in the Machine Specs and Operation Manuals document . However, operation manuals serve as an introduction and do NOT act as a substitute for training and approval.

SAFETY RESOURCES

1. http://atkinsonhall.calit2.net/index.php?option=com_content&view=article&id=134&Itemid=141
   (Atkinson Hall emergency information, including the Calit2 Emergency Information and Action Plan)
2. http://blink.ucsd.edu/Blink/External/Topics/Policy/0,1162,15498,00.html
   (UCSD Environment, Health and Safety)
3. http://blink.ucsd.edu/Blink/External/Topics/How_To/0,1260,14110,00.html
   (General Chemical Safety Guidelines)
4. Phone numbers:
   a. Fire/Police: 9-1-1
   b. UCSD campus police: (858) 534-4357   (534-HELP)
   c. UCSD Poison Center   (800) 876-4766
   d. Chemical Spill   (858) 534-3660   (858) 534-4357 afterhours
5. Material Safety Data Sheets (MSDS):
   a. http://siri.org/msds/
   b. http://www.cdc.gov/niosh/database.html
   c. http://www.camd.lsu.edu/msds/msds_search.html
   d. http://www.ehs.cornell.edu/lrs/internetMSDS.htm

SAFETY PROCEDURES

Review the Atkinson Hall emergency information referenced above. This includes the Calit2 Emergency Information and Action Plan, covering procedures in the case of fire, earthquakes, building evacuation and bomb threats. For all emergency evacuations the meeting point is across Voight Dr. and in parking lot number 502.

Some of the Prototyping Facility lab spaces are located in close proximity to, or under the general umbrella of, the Nano3 facility. The Nano3 facility environment contains many potential hazards, posed primarily by the chemicals used. Review the information available on the Nano3 website, including their Policies and Procedures document (http://nano3.calit2.net/register/internalRegInfo.php). It has emergency procedures as well as the operation of the building alarm systems. The next page shows an evacuation map of the area, including the emergency response resources.