

JSA

LABORATORY	HAZARDS	CONTROLS
Mechanical workshop	Hands injuries	Use gloves, pay attention to secure the object to be drilled, hammered or similar into a bench vise.
	Eye injury	Use safety goggles, stay at a safe distance from the angle grinder or similar.
	Chips and shavings	Use work overalls when using drill, drill press or angle grinder.
Electronical workshop	Skin burns	Use the third hand to support the PCB/component to be soldered, use gloves.
	Inhale soldering fumes	Use always the fume hood to aspire fumes.
	Fire hazards	Always put soldering iron on his soldering station (our station automatically switch off the heating of the soldering tip when inserted on his housing) .
	Chemical intoxication due to solder paste	Use gloves when placing solder paste and wash hands after that procedure.
TASK	HAZARDS	CONTROLS
3D printing	Being stuck by moving parts	Never put hands on the printer when moving, safely close the printer door.
	Glass plane	Use gloves when removing printed parts from glass plane, if it brokes put it immediately in the "glass trash" to safe the area.
	Burns	Use gloves to manipulate printer and printed parts, never handle the printer when the extruder is hot.
	Chemical inhalations	Use printers on a ventilated room, stay away from the 3D printers room when printing.
	Skin cuts removing parts	Use gloves when removing printed parts, with particular attention when using cutter.
Waterproofing cables	Chemical irritation	Use gloves and long sleeves.
	Chemical inhalation	Use M3 filtering masks and operate in a well ventilated room.
Transporting ROV, control station and all task props	Backbone injuries	Use as much as possible a cart to move all the pieces, lift heavy parts at least in two people.
	Hands and arm irritation and scratches	Use gloves and long sleeves clothes.

	Foot injuries	Use closed footwear, secure ROV and other parts to the cart when transporting.
Coding	Backbone and neck stress	Use ergonomic chairs, set the proper height and the proper screen position and angle.
	Eye stress	Wear anti-blue light goggles, set dark themes and low backlight on the laptop, use multiple screen to enlarge to the maximum all the windows.
	Wrist stress	Use keyboards with proper slope, use mousepads with proper wrist padding.
Pool tests	Slipping	Move slow next to the pool with wet floor, wear plastic flip flops with good grip.
	Drowning	Always have a lifeguard or a scuba diver at the pool.
	Electrocution	Put all the electrical plugs far away from pool and puddles, on a table and secure cables to the table itself with ropes, carabineers or duct tapes.

ROV launch procedure

- 1) Check integrity of tether and tether strain relief.
- 2) Check enclosures and pressure valve.
- 3) Ensure that propellers are guarded and there are not exposed electrical cables.
- 4) Connect the ROV to the power supply and to the control station.
- 5) Turn on the ROV logical part.
- 6) Check status led and temperature inside the main tube and the Power Conversion Box.
- 7) Check pressure inside the main tube.
- 8) Turn on the 12V.
- 9) Safely put the ROV in water with the help of the strain relief.
- 10) Step away from the pool side.
- 11) Turn on thrusters.