

Space Risk Assessment Form

Title of Risk Assessment P172 general lab safety assessment

Date of assessment 06/10/21

Department Physics

This risk assessment must be reviewed whenever a significant change or an accident occurs

Training Courses Required as Identified by Risk Assessment	Introduction to laboratory spaces	Electrical safety
	Introduction to chemicals (if used)	
	Cryogenics (when in active use)	

Assessment carried out by R Edwards

Additional information

The research in this laboratory covers a wide range of different measurements. Not everyone will use permanent magnets, but as they are present in the lab all users must be aware, particularly when moving around the robots. Currently cryogenics are not being used, but lab users are made aware of the risks and full training will be given when the systems are active.

<u>Hazards and how they may cause harm</u>	<u>Who may be at Risk?</u>	<u>Existing Control Measures</u>	<u>Current Risk Level</u> (VL,L,M,H,VH)	Where current risk is M, H or VH, what additional <u>Control Measures</u> are required?	<u>Action required by whom & by when?</u>	<u>Final Risk Level</u>
Use of high voltages for generating ultrasound (EMATs, piezoelectric transducers)	All users	Check equipment before use. Ensure there is no voltage applied to the EMATs before handling. Ensure insulation is suitable.	Moderate	User training before someone uses any equipment.	Training by supervisor, or experienced student / PDRA.	Low
Burns or other issues from using soldering iron	All users	Training in correct technique is given. Protective eye wear and face mask are worn.	Low			
Risk of fire from use of electrical equipment	All users	Correct training given. Equipment tested regularly (PAT).	Very low			
Trip hazards from cables, samples, or equipment in the lab	All users	Minimising objects on the floor and tucking wires away as much as possible	Very low			
Dropping or back strain when carrying heavy items	All users, but primarily those doing NDT	Use correct carrying technique. Steel capped boots to be used where appropriate.	Low			
Injuries from sharp items e.g. scalpels	All users	Careful use of the scalpel. Sharp items must be kept covered when not in use – place blade first into a block of polystyrene.	Low			

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used when making EMATs						
Cryogenics in the laboratory – burns or asphyxiation	All users	All users of the laboratory to take basic cryogenics safety training. Nitrogen dewar and other cryogenics to be tested regularly for leaks. Suitable gloves to be worn when handling cold items.	Moderate	Laboratory has a large volume. All users informed when cryogenics are present.	Supervisor; cryogenics users.	Low
Injuries from strong magnets which are present in the laboratory	All users	Take care when handling magnets. Don't bring them too close together. Don't bring magnetic tools too close to a magnet.	Low			
Injuries from the robotic crawlers	All users of the robots; anyone moving near to them	Robots only to be controlled by those who are trained. Warning signs on doors and near large magnets in the wheels. Only move robots when wearing safety boots, and remove anything magnetic / sensitive e.g. credit cards before going near to them.	Low	User list to be created for training.		Low
Use of high magnetic fields	All users	User to check and notify all lab people if the magnet is to be switched on.	Low			

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(superconducting magnet)		People with implants or pacemakers to not work in the lab when it is on.				
Back or eye problems from working at a computer	All users	Sit in the correct position. Take regular breaks. Ensure chair and desk are set up properly.	Very low			

Work should not be carried out until the assessment is completed to a suitable & sufficient level and all required control measures are in place.

Overall Final Risk Rating (Highest level in final column above)	Low
Additional Comments from Risk Assessor (e.g. funding or practical implications)	
Any further actions required to allow work to commence	

Approved By	RS Edwards	Position	Associate Professor (Reader)
Date	06/10/21		

Please print a copy, sign it and keep for your records

	Severity
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Risk Level

Likelihood	Superficial	Minor	Serious	Major	Extreme
Unlikely	Very low	Very low	Low	Low	Moderate
Possible	Very low	Low	Low	Moderate	High
Likely	Low	Low	Moderate	High	Very high
Very likely	Low	Moderate	High	Very high	Very high
Extremely likely	Moderate	High	Very high	Very high	Very high

See '[Matrix for risk evaluation](#)' for further guidance.

Very low	Acceptable risk - no action required
Low	Tolerable risk - further control measures not required, but status must be monitored
Moderate	Further control measures required to reduce risk as far as is reasonably practical
High	Urgent action required to allow activity to continue
Very high	Risk intolerable - activity must cease until the risk has been reduced