UCL Department of Electronic and Electrical Engineering

HEALTH AND SAFETY HANDBOOK 2026-2027

Departmental Arrangements for Safety and Security

Emergency Instructions for EEE

Never put yourself or others in danger. If in doubt - contact Security.

Fire Evacuation

	**If you discover a fire** (or other emergency situation) raise the alarm by operating the nearest break-glass call point and **dial 222** from an internal phone or **020 7679 2222** from a mobile. Provide details of your location and the exact location of the fire.
	Do not attempt to fight the fire unless you have been trained and are confident to do so. Otherwise, you must evacuate the building immediately and report your actions to the Fire Evacuation Marshal at the assembly point. **IF IN DOUBT - GET OUT OF THE BUILDING!**
	**If you are in the building** when the fire alarm is activated you must leave immediately by the nearest exit and go directly to the assembly point. Ensure all visitors are escorted out of the building by their hosts. Further information on fire safety is available on the Fire Safety website. Fire Safety training is mandatory for all members of staff.
	**If you have mobility impairment or sensory disability, then please ask your** line manager / supervisor / tutor to help you produce a PEEP (Personal Emergency Evacuation Plan). The plan will identify how you will be evacuated in the event of an emergency for which a number of different measures may be implemented including the assignment of a buddy. Key members of staff where you regularly work should be provided with a copy of your PEEP by your line manager or supervisor, together with Security.
	**Fire Escape Routes** – must be kept clear of combustible material and stored items to ensure that they remain fully accessible and free from sources of ignition. All fire doors must be maintained self-closing at all times and not wedged open for any reason unless by an approved device.
	All lifts will go to ground on activation of the fire alarm. Do not attempt to use a lift during an evacuation unless it is a designated evacuation lift and you require assistance to evacuate. Do not stop to collect personal belongings.
	**Good housekeeping** - can lower the chances of a fire starting. • Empty bins regularly • Avoid the accumulation of combustible material. • Turn equipment off at the wall at the end of the working day. • Keep cables tidy.

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PART 1

POLICY AND ORGANISATION

STATEMENT FROM HEAD OF DEPARTMENT

EEE is committed to the safety, health and welfare of all its staff, students, visitors, contractors and members of the public by protecting them from any adverse effect on their health and safety arising from the activities of the Department. This also involves taking reasonable care for oneself and others, reporting hazards, and adhering to safety procedures. EEE seeks continual improvement of its occupational health and safety systems through processes of measurement and review in order to achieve or maintain best standards and practices.

This document sets out the commitment of the UCL Department of Electronic and Electrical Engineering to ensure that its activities are carried out in a safe manner in accordance with the corporate Statement of Safety Policy of University College London and the requirements placed upon the Department by the UCL Approved Code of Practice entitled 'The Management of Health and Safety in Departments'.

In addition to the statement of policy, the document describes the organisational structure for health and safety management within the Department. The document contains the Department's arrangements to control the health and safety risks that arise from its work activities. The Safety Handbook contains both the Policy document and Department's written Arrangements for Safe Working. The Department of Electronic and Electrical Engineering is a department of UCL and is responsible to the Provost and President for the implementation of the arrangements in the UCL Statement of Safety Policy.



Professor John Mitchell, Head of Department

STATEMENT OF SAFETY POLICY

1. The policy of the Department is to promote, through active management of its hazards and activities, the safety, health and welfare of all its staff, students, visitors, contractors and members of the public on the Department's premises and to protect them elsewhere from any adverse effect on their health and safety arising from the activities of the Department.
2. The Department seeks continual improvement of its occupational health and safety systems through processes of measurement and review in order to achieve or maintain best practice standards.

Commitment and leadership by the Head of Department and senior Departmental management

3. The Department recognises the importance of establishing clear lines of management accountability for controlling the risks of its work activities and these are set out in the Organising for Safety section.

4. The Department recognises that commitment and involvement by senior managers plays a significant part in promoting health and safety in the Department.
5. The Department (subject to approval by faculty/finance) will allocate sufficient resources in terms of people, money and facilities to plan, implement, monitor and review its safety systems.
6. The Department will ensure that staff and students are kept informed of matters which may affect their health and safety including the dissemination of this Policy statement.
7. Senior Departmental management will take the lead in consulting with staff, safety representatives and students on matters of health and safety and will seek their Involvement in the development and improvement of safety in the Department.
8. The Department will ensure that health and safety considerations are Integrated into the planning of Departmental work activities.
9. The Department will consider its overall health and safety policy in parallel with other corporate policy that is designed to promote the well-being of staff and students such as policies on equal opportunity, harassment and bullying, disability, age and racial discrimination.

The duty to establish, maintain and develop systems for the management of health and safety.

10. The Department is committed to planning and setting objectives for the management of safety commensurate with the nature and level of the risk created by its work activities and fully implementing those measures deemed necessary by the Department as indicated in the Index of Arrangements for Safe Working section.
11. All new policies and changes to existing policies are subject to consultation with the Departmental Safety Committee. Final approval is an action by the Departmental Safety Committee chair. All approved and signed off policies are uploaded to the Departmental Safety webpage and communicated to staff through emails and termly newsletters.
12. The Department undertakes to monitor the operation of its systems and procedures for safety management and review them in the light of experience and in accordance with UCL corporate direction.
13. The Department is committed to ensuring that risk assessments are carried out as required by the Management of Health and Safety at Work Regulations 1999 and other regulations applicable to its work activities. These assessments will be made by the staff responsible for supervision of the work, set out in writing and signed by the person with responsibility for supervision of the relevant work.
14. ***No work is permitted to start unless*** it is covered by a suitable and sufficient assessment of the risks involved in the work, without which the Department cannot be considered to have taken reasonably practicable steps to manage the risks of its work activities to staff, students, visitors and others who might be affected by its work (1)
15. The Department is committed to ensuring that all work activities are carried out by persons competent to perform those activities (2). To this end, the Department will ensure that all members of the Department receive such training and instruction as required for them to discharge their tasks and duties in a competent manner.
16. The Department arranges for work activities to be supervised by competent people.
17. The Department recognises that a person can only be fully competent to discharge a duty If they accept that duty, understand the nature of that duty and are allocated sufficient time to discharge that duty.
18. To give effect to this Policy, the organisation and procedures as described or cross-referenced to in this document have been approved and authorised by the Head of Department who is responsible to the Provost and President and Council for setting and maintaining the standards of safety in the Department.
19. The Department recognises its responsibilities with respect to fire safety and is committed to ensuring its systems and procedures comply with UCL policies.

The duties of staff, students and visitors

20. It is a legal duty (3) for ALL staff, students and visitors to co-operate with the policy for safety set out in this

document and all other Departmental systems and procedures designed to promote and ensure their health and safety.

21. Members of the Department shall not interfere with or misuse anything provided to ensure their safety.

REVIEW AND APPROVAL PROCEDURES

The Departmental Health and Safety Handbook containing the Departmental Health and Safety Policy and safety arrangements are reviewed annually at the beginning of each academic year.

All other health and safety policies and procedures are reviewed every three years. These documents shall be reviewed sooner under the following conditions,

- Changes to UK legislation and/or regulations
- Changes to UCL health and safety policies and guidelines
- Incidents or policy violations

Policy owners are responsible for the reviews and updates.

All new policies, and changes to existing policies, are subject to review by the Departmental Safety Committee. Final approval is an action by the Departmental Safety Committee chair.

All approved and signed off policies and procedures shall be uploaded to the departmental safety webpages and communicated to staff through emails, departmental meetings and termly newsletters.

ORGANISATION AND ARRANGEMENTS

Managers/Supervisors within the Department have responsibility for ensuring the management of health and safety. They are expected to complete the

Safety Officers have responsibility for monitoring the implementation of the Health and Safety policy and reporting their findings to the Head of Department and SMT. The DSO is responsible for preparing a termly SMT Report to with a dashboard to monitor progress against the departmental KPIs. This will be submitted to the HoD who will present at the relevant SMT meetings. The DSO and HoD will meet regularly outside of this to further discuss any safety concerns allowing for both upward escalation and downward assurance.

The following persons have Health and Safety responsibilities in the Department.

Position	Name	Deputy
Head of Department (HoD)	Professor John Mitchell	Professor Sally Day (Teaching) Professor Cyril Renaud (Research)
Departmental Manager (DM)	Mr. Andy O'Reilly	
Technical Services Manager (TSM) Radiation Protection Supervisor (RPS) Sustainability Lead	Mr. Simon Barnes	Dr Steve Hudziak (TSM) Dr Firoz Alam (RPS)
Departmental Safety Officer (DSO) Chemical Safety Officer (CSO) Off Site Work Coordinator (OSWC) Senior Fire Marshal (Roberts) (SFEM) Wellbeing Champion	Ms. Roshni Harkishin	Dr Thomas Gilbert (Wellbeing)

Senior Fire Marshal (MPEB) (SFEM)	Mr. Andrew Moss	
Laser Safety Officer (LSO)	Professor Cyril Renaud	
Legionella Awareness Officer (LAO)	Tommy Tagg	
External to EEE		
Faculty Engineering Safety Advisor	Emma Price	
UCL Safety Advisor	TBC	
Union Appointed Health and Safety Representatives		
UCU	Unison	Unite
Alun Coker (Health and Safety Officer) alun.coker@ucl.ac.uk	Munyaradzi (Munya) Marisa gcpnrisa@gmail.com	David Ladd d.j.ladd@ucl.ac.uk
More Reps and Union Information can be found here.		

FURTHER ADVICE AND INFORMATION

EEE intranet safety pages: **https://intranet.ee.ucl.ac.uk/safety**

UCL Safety website: **https://www.ucl.ac.uk/safety-services/**

UCL Security website: **https://www.ucl.ac.uk/estates/our-services/security-ucl**

HSE website: **http://www.hse.gov.uk/**

DEPARTMENTAL IMPROVEMENT SAFETY PLAN 2026/27

EEE is committed to the safety, health and welfare of all its staff, students and visitors, by protecting them from any adverse effect on their health and safety arising from the activities of the Department. This also involves taking reasonable care for oneself and others, reporting hazards, and adhering to safety procedures. EEE seeks continual improvement of its occupational health and safety systems through processes of measurement and review to achieve or maintain best standards and practices. This document sets out the safety plan commitment of the UCL Department of Electronic and Electrical Engineering to ensure that its activities are carried out in a safe manner in accordance with the corporate Statement of Safety Policy of University College London and the requirements placed upon the Department by the UCL Approved Code of Practice entitled 'The Management of Health and Safety in Departments'

These KPIs have been in line with UCL Safety Objectives and with regards to proportionate risks within the department.

KPI 1 - Mandatory safety training completion
EEE is to continuously improve with the aim to achieve the UCL target of 95% completion rate for all mandatory safety training modules across all departments. This will embed a culture of continuous learning and ensure we meet our legal and institutional obligations.

KPI 2 - 100% of Initial incident assessments carried out in ≤5 days
EEE is to maintain a high-level incident investigation process by providing training and guidance to the Incident Co-ordinator community. By improving investigations, we make sure we learn the right lessons and drive continuous safety improvement. All Incident coordinators in EEE completed the UCL mandatory training by July 2026.

KPI 3 - All new Lasers have Risk Assessments and Schemes of Work
EEE has a large number of class 3 and 4 laser systems and labs. While most of these are in fibre therefore presenting lower risk these risks need to be documented appropriately with Risk Assessments and Scheme of Works available for each system.

KPI 4 - Expired risk assessments
Risk assessments on RiskNET have a maximum of 12months, after this they will expire unless they are reviewed. These need to be checked regularly.

KPI 5 - SMT presence in inspections
Lab inspections to ensure compliance with safety policy and procedure. Senior manager team to be informed and present for areas needing extra attention. This is in addition to the specific role holders being involved where necessary.

KPI 6 - Responsible roles filled
EEE has a number of responsible roles required due to the risks in the department in addition to the standard necessity for first aiders and fire evacuation marshals.

Progress against KPIs is discussed at DSC and at SMT level termly.

COOPERATION IN SHARED WORK AREAS

In situations where either a) EEE staff or students are working in another UCL department or at another institution, or b) non-EEE UCL staff or students, visitors, or contractors are working in EEE, lines of responsibility for safety should be made clear. There should be no confusion as to whose safety arrangements are to be followed.

Anyone working in EEE space should abide by the EEE rules and arrangements for safety, both those set out in this Handbook and any other special operating procedures for particular work.

Line managers, PIs, and laboratory safety coordinators are all responsible for ensuring workers under their supervision and/or management are competent to perform the procedures required for their work.

COOPERATION AT THE BUILDING LEVEL

The department is predominantly based in the Roberts Building and the Malet Place Engineering Building. These are shared with several other departments. A coordinated approach to building fire evacuation among the departments is under development, to include regular meetings of the Department Senior Fire Evacuation Marshals coordinated by the Faculty Health and Safety advisor and a new system for evacuation tags and boards.

In the case of working in other spaces i.e. other buildings or sites staff and students must refer to the local guidance and ensure they have completed the necessary local inductions to work in the area safely.

EEE STAFF OR STUDENTS WORKING IN OTHER DEPARTMENTS/ORGANISATIONS.

If a member of the EEE department is working elsewhere at UCL, or in another organisation, they should work according to the safety rules and guidelines of the host department or organisation. If these are not made clear, please in the first instance contact the Departmental Safety Officer (or equivalent) of the host department. If concerns remain, workers should contact their line manager and the EEE Safety Officer for advice.

Service Engineers visiting EEE

This category includes service engineers and other contractors whose presence in the department is at the direct invitation of a member of staff (not Estates or ISD). They must be given safety instruction on fire evacuation procedures, how to contact a first aider, and how to raise the alarm in the event of a fire by the member of staff hosting them. They may work alone in low-risk areas but need to be supervised in high-risk areas by a competent person. Engineers and contractors working under their own risk assessment and procedures should provide copies of these documents to the responsible staff member, who is responsible for ensuring the work area is compliant with these requirements.

Staff and students from other departments working in EEE

Staff and students from other departments must work under the safety rules and guidelines of the EEE department. It is the responsibility of the member of staff who has invited them (the 'host') to ensure that the worker has been informed of the relevant safety arrangements, but they can delegate this task to another competent person.

Visitors and Guests to EEE

Visitors include any person from an external organisation, or any independent individual, who has been granted official UCL visiting status by the Department. Official visitors are treated as full time staff for the purposes of safety. They are therefore permitted to undertake any task normally expected of a UCL staff member, provided they have received all the necessary training. All official visitors, who are visiting for more than 3 weeks, are also required to complete all the usual departmental and UCL inductions and mandatory training. It is the responsibility of the EEE staff member sponsoring the appointment to ensure that the visitor complies with EEE and UCL safety policy.

Guests include any person from an external organisation, or any independent individual, who is hosted in the department for a period without a formal visitor appointment. Guests should be supervised at all times. They are not permitted to work in department laboratories but may observe and advise activity in laboratories while under supervision.

Outreach Activities

Visitors in the department for outreach activities, such as summer schools or shadowing, must abide by the rules and guidelines of the EEE department. An itinerary and risk assessment must be in place before any such activities take place in the department. The organiser in the department must ensure both the itinerary and risk assessment are complete and distributed to all involved in the visit. The Risk Assessment must be carried out in line with the departmental guidance.

Notification

It is the responsibility of all EEE staff to provide timely information when requested regarding:

1) Any work carried out by themselves or their students, in other departments or organisations. The DSO should be notified of any such work during the planning stages.

2) The presence of visitors and guests who will be working in the department. Visitor appointments should be requested via the Department Manager, before any guaranteed offer has been made and in advance of any travel arrangements.

Colleagues should be considerate when inviting guests into labs and ensure that lab safety coordinators/lab managers (and other lab users) are notified in advance and have opportunity to raise reasonable objection.

3) The technical professional services team should be notified of the planned presence in EEE of any service engineers or contractors.

PART 2

WORKING SAFELY

GENERAL SAFETY

The Department of Electronic and Electrical Engineering is usually a safe place to work. It is not a place free from hazards, but there are adequate control measures are in place to minimise the risks associated with the hazards present. It is responsibility of everyone in the department to follow the correct procedures and safe working practices to keep themselves and others safe.

This section of the Handbook is designed to help EEE staff/students to work safely. Safe working practices should be reviewed when circumstances change or annually as a maximum. The perception of acceptable risk changes and new knowledge affects working practices.

You are expected to follow health and safety rules set in this handbook and other local safety rules. Failure to follow these rules will be considered as a serious breach of conduct which may result in access to facilities being withdraw temporarily or permanently and/or disciplinary procedures.

SECURITY IN THE DEPARTMENT

- New keys can be obtained from EEE IT Support Team (Room 604, 6th floor of the Roberts Building)
- Keys are not to be shared between individuals, even if in the same group or team. Keys are issued to individuals only and therefore keyholders should not lend out keys or allow access with their keys.
- Keys/codes to the labs and high-risk areas can be only obtained after completion of appropriate inductions and training. This may include, but is not limited to, a risk assessment, local lab inductions, equipment training, supervisor sign-off etc once these have been completed and evidence provided to the key issuer then keys may be issued.
- Do not let people you do not know through card access doors without checking their ID card. If you have serious concerns, please contact Security, and do not approach.
- People leaving the department must return their keys on the last day.

- Lost keys should be reported to the defects@ee.ac.uk and support@ee.ac.uk
- Departmental keycode access policy and receipt of key can be found here
- At weekends and outside normal working hours there is limited cover by UCL security personnel, and the front desk may not be manned.
- Do not leave unsecured valuables (laptops, iPad) openly on display when not present.

SAFETY REGULATIONS

Health and Safety legislations/regulations that may apply to Department of Electronic and Electrical Engineering

- Health and Safety at work Act 1974
- The Management of Health and Safety at Work Regulations 1999
- Control of substances hazardous to health (COSHH)
- Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)
- Provision and Use of Work Equipment Regulations 1998 (PUWER)
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)
- The Control of Artificial Optical Radiation at Work Regulations 2010 (AOR)
- Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013
- **Workplace (Health, Safety and Welfare) Regulations 1992:**

FIRE SAFETY

General guidance

- Keep corridors and fire exits clear. Good housekeeping is an important first rule. All walkways should be kept clear of obstructions.
- Fire doors are never blocked or wedged open. Fire doors not only hold back heat and flames for a period but also prevent the spread of dangerous smoke.
- During fire evacuation, if people are working as you are leaving, we all have a duty of care to make sure they have heard the alarm and are aware of the situation. If they do not move, make a note of the room, leave, and report to a fire marshal. You also have a duty to care to yourself.

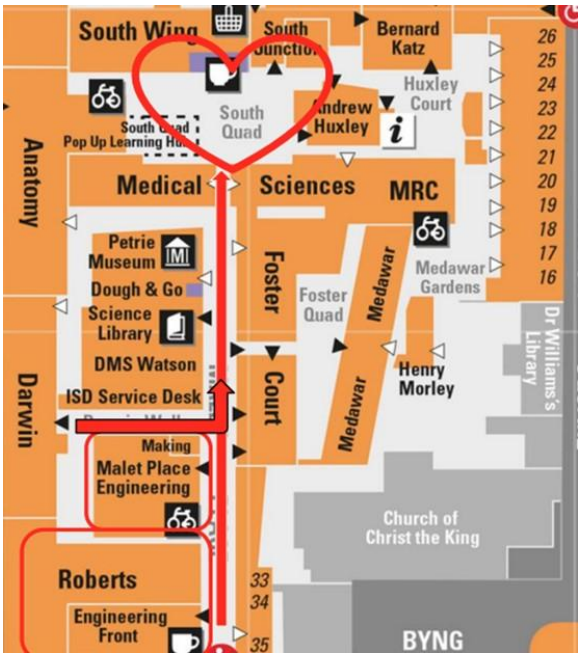
Fire evacuation procedure

If you discover a fire:

1. Activate the fire alarm
2. Dial 222 or 0207 679 2222 from a mobile (this number is printed on the back of your ID card)
3. Evacuate the area and close any doors and windows (if there is time to do so) on your way out
4. Go to the fire assembly point. For **Roberts Building** & **MPEB** the assembly point is the Anatomy Yard- South Junction. Walk through the arch in the Medical Sciences Building to the quadrangle near the South Junction near where the print room café tables are situated)

If working on other sites please refer to the local guidance and familiarise yourself with the emergency evacuation procedures.

5. Do not re-enter the building unless told to do so by a FEM.



If you feel confident and trained to do so and the fire is small, use appropriate fire extinguisher. If it is an electrical fire, switch off power to prevent re-initiation. Fire hoses in Robert's building are for the fire department use only.

If the fire alarm sounds:

- You must evacuate immediately. Leave the premises by the nearest escape exit or staircase which is free from smoke. DO NOT USE THE LIFTS unless you have a Personal Emergency Evacuation Plan (PEEP) in Place
- Follow the instructions of the fire evacuation marshals.
- Do not stand outside the buildings. Go to the assembly point, which is located outside the Print Room café, in the South Junction. If you stay outside the building it can obstruct the fire brigade access
- Do not re-enter the building unless told to do so by a FEM.

Fire Marshals have been appointed on each floor. Their main duties are:

- To ensure as far as possible, taking due regard to their own safety, that all personnel in their area leave the building speedily and safely.
- After leaving the building to report to the Senior Fire Evacuation Marshal whether their area is clear or not.

All fire marshals can be found on the responsible persons register in riskNET, this is updated on a termly basis after the safety committee.

PERSONAL EMERGENCY EVACUATION PLANS (PEEPS)

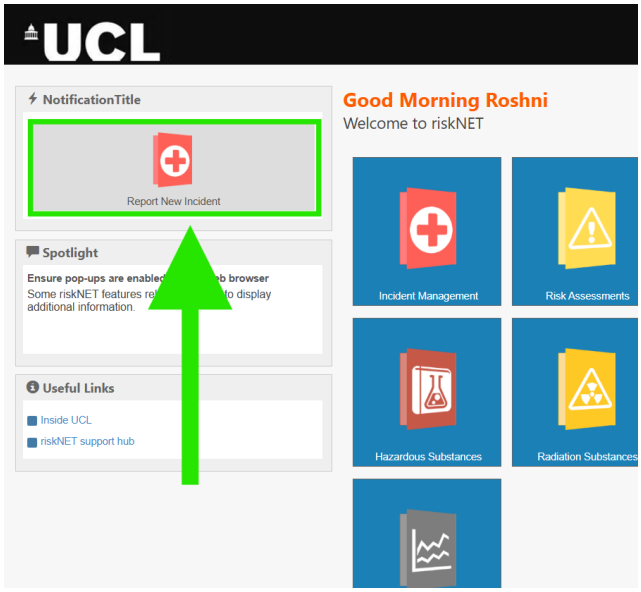
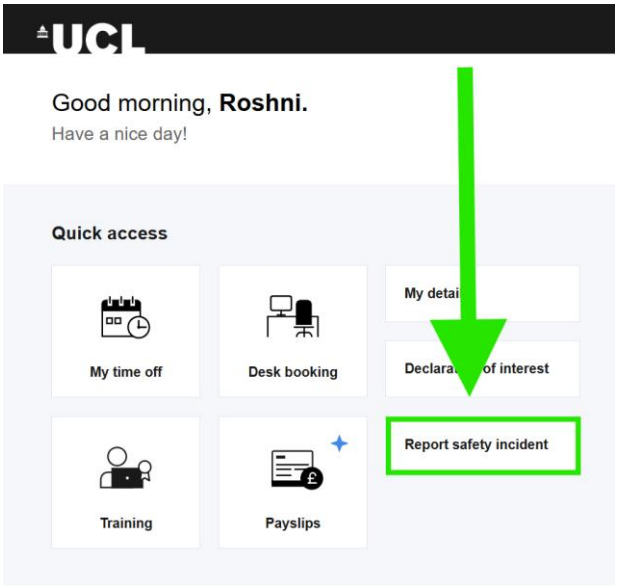
A personal emergency evacuation plan is an agreement between the individual requiring the support and the organisation, it is a summary of a discussion to find suitable management procedures and practical assistance that will be provided to an individual in the event of an evacuation to ensure they can reach a place of safety.

In the event an individual cannot evacuate using the stairs then a PEEP must be in place to ensure another system is followed and the person can evacuate immediately and safely upon hearing the fire alarm or for any other reason. Use of the fire lift may needed. Get in contact with the department safety officer to arrange a PEEP and find more information on the UCL Central Fire Safety Pages.

ACCIDENT AND INCIDENT REPORTING

Anyone at UCL can report an accident, not just the injured party and reports can be filed anonymously if you wish. All accidents, near misses and hazard observations must be reported using the online riskNET form.

The incident form must be completed as soon as possible. The department will investigate issues, identify root causes and take action to prevent recurrences. You can report in the following ways:

Via RiskNET:	Via Inside UCL
	

Under the Reporting of Injuries Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013 certain incidents must be reported to the Health and Safety Executive. This will be done by UCL Safety Services.

All accidents and incidents should be reviewed and signed off in RiskNET within 5 working days.

Injury treatment

- Persons with minor injuries (cuts, abrasions, sprains) must immediately be referred to a qualified first aider to ensure that there is proper assessment and treatment. First Aider lists are found in each stairwell or at the Departmental Office, 7th Floor Roberts.
- Major injuries will be always dealt with by the Accident and Emergency Department of University College London Hospital (UCLH).

- Eye injuries should always be considered as serious. Those caused by chemical splash should be treated immediately by rinsing for 10 to 20 minutes as soon as possible. The casualty must then be sent for a medical examination, preferably to Moorfields Eye Hospital. Anybody with a laser related ocular injury should to Moorfields Eye Hospital with details of the laser that caused the injury as soon as possible and within 24hours.

Accident Investigation

The incident will be investigated by the appropriate department. In EEE, incident co-ordinators should be updated annually in the responsible persons register. All incident coordinators (DSO, HOD, TSM and DM) will receive an incident report when a new incident is reported in the department. The DSO will ensure the investigation is carried out in conjunction with the staff and post graduate students as appropriate and confirm any actions required. Safety services and external stakeholders will be informed as appropriate.

In the event of a serious accident as little as possible should be handled or moved. Any equipment or product (including disposable items) involved in an accident or incident must be retained and where possible left in situ, pending investigation.

Any incident resulting in injury to a member of EEE will be investigated by their direct line manager. These investigations may lead to involvement of workplace health or occupational health UCL services.

OUT OF HOURS WORKING

Out-of-Hours Working

Access to the department will, at all times, be managed to maintain a safe and secure working environment for all students, researchers, and staff. Out-of-hours working should be avoided, if possible; especially late-night work, and work during closure periods.

The form to request access is here: Out-of-hours access request form – Fill in form

Entry to EEE spaces out-of-hours will require a periodic application for card access. This access will be conditional on:

1) Permission from the supervisor or line manager (academics may self-authorise)
2) For lab work, out-of-hours working is considered in the risk assessment
3) Mandatory safety training being up-to-date, and additionally the Fire Evacuation Marshal training must be completed
4) A check-in or 'buddy' system must be in place as detailed in the Department's lone working guidance.

Working hours

Core Working Hours	M-F 10.00-16.00	When staff are expected to be available. UCL Wide Policy
Normal Working Hours	M-F 07.00-19.00	Security available and building open as normal.
'Extended' working hours	M-F 06.00-07.00 19.00-22.00 Weekends 07.00 - 19.00	Reduced security and departmental staff available.
Out of Hours	M-F 22.00 - 06.00, Weekends 19.00 - 07.00	No departmental safety teams available, reduced security staff available. Use of Safe Zone/Buddy system

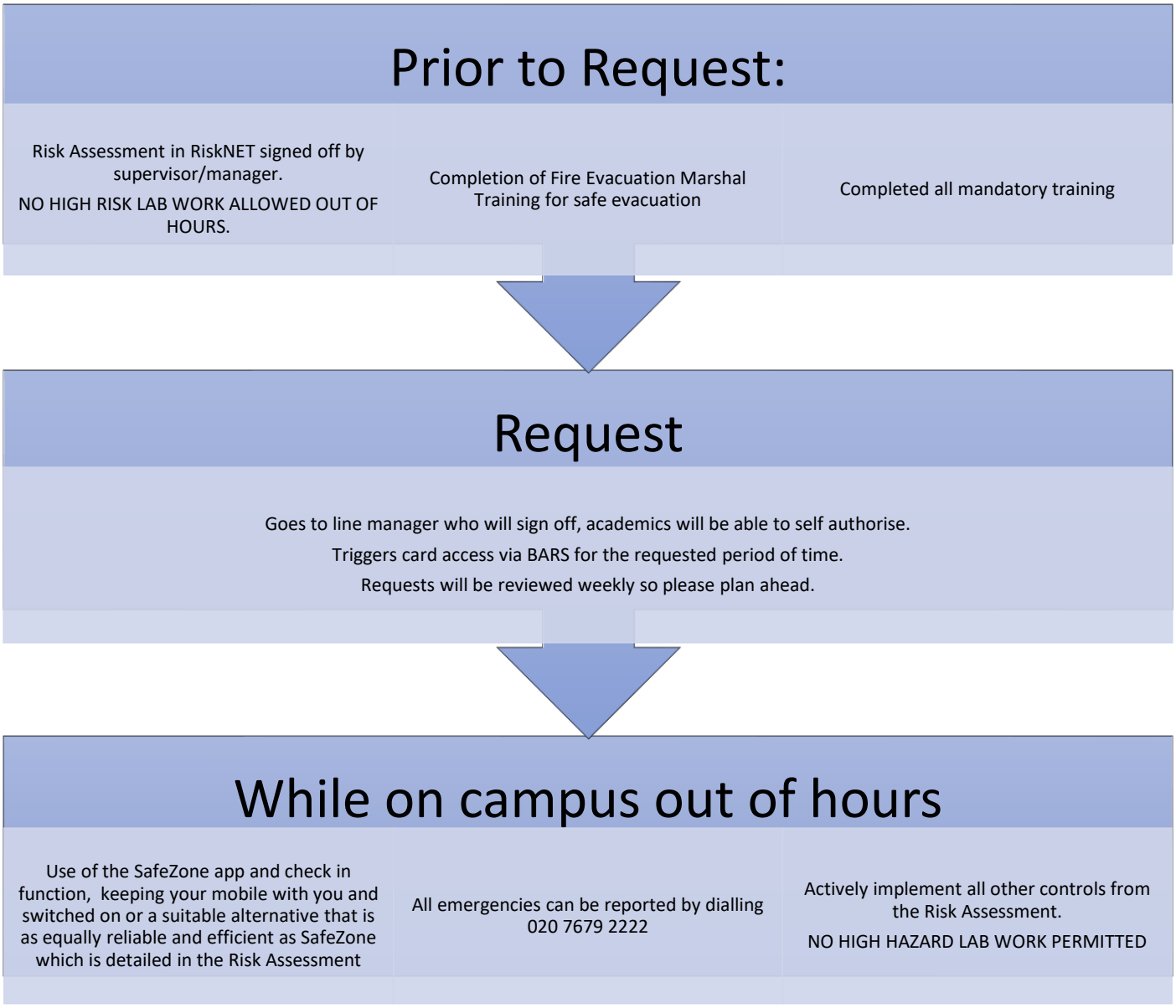
		required.

Standard Access

	Standard Card Access	Maximum period before renewal needed
Academic Staff	Extended Working Hours 06.00-22.00	Termly
Professional Services Staff	Extended Working Hours 06.00-22.00	Termly
Post-doctoral Researchers	Extended Working Hours 06.00-22.00	Termly
PhDs	Extended Working Hours 06.00-22.00	Termly
Undergraduates and PGTs	Normal Working Hours 07.00-19.00	N/A
Staff with departmental critical roles in line with the RCP/BIA will have 24/7 card access in case of emergency.		

Terms are defined as:
Term 1
Christmas Closure
Term 2 including Easter Closure
Term 3 including Summer Period

Request process:



First Aid and Emergency Cover

During out-of-hours periods, emergency cover is provided by UCL Security who are all trained first aiders. In case of an emergency requiring first aid, either use the SafeZone app, call ext. 222 on an emergency phone, or 0207 679 2222 from a mobile (this number is printed on the back of your ID card), stating location and nature of injury/emergency.

Misuse of access cards

Allowing access to unauthorised persons is strictly forbidden, including tampering of locks. Misuse of ID cards keys will lead to disciplinary action. Lost or damaged cards must be reported immediately to UCL Security Systems via email (securitysystems@ucl.ac.uk), or in person (office located in the Andrew Huxley Building).

LONE WORKING

Lone working may be defined as working while remote from colleagues i.e. colleagues may be in the next room, on other floors in the same building, or other people may be present who are not work colleagues. Lone workers can be peripatetic working between different locations or in fixed locations during normal working hours or out of hours. A risk assessment covering lone working with details of activities must be available and carried out in riskNET. The full UCL guidance including advice on specific activities can be found on the UCL Lone working safety pages.

Risks associated with working alone:
- Unable to summon help because of injury, ill health, or an emergency.
- Unable to carry out a task safely while alone.

Individual vulnerabilities
Specific individuals may be subjected to increased risk when working alone:
- Inexperienced workers.
- Individuals with impaired vision, hearing or mobility.
- Some medical conditions make sufferers unsuitable for lone working. Managers who have concerns about an individual's fitness for lone working should refer them to Occupational Health after completion of the Job Hazard Identification Form

Managers must ensure that:
- Lone working is avoided where possible.
- Time spent lone working is planned and covered in a risk assessment.
- Risk assessments for the work under their control indicate the additional control measures required if the work is carried out while alone and these measures are actively implemented.
- The lone worker understands the risks and precautions involved in their work i.e. has the experience, training and capability to work without direct supervision and to deal with any emergencies.

Managers should consider one or more of the following controls depending on the level of risk:
- A start/finish time has been agreed for out of hours lone working.
- The lone worker informs their supervisor that work has started / finished.
- Periodic checks by the supervisor or person designated by the supervisor are made at agreed intervals e.g. hourly. Checks can be in person, by telephone (mobile or landline), teams or another suitable method.
Note: ensure the means of communication works in the work location prior to start the work (e.g. mobile phone reception)
- A procedure is in place to deal with failure to contact lone worker at agreed intervals which is detailed in the RiskNET Risk Assessment.
- A record is kept of the information that has been provided to individuals who work alone.

Managers must review the risk assessment periodically:
- Every 12 months or sooner if there are any changes in activity e.g. people, equipment or location.
- After an accident or incident relating to the work.
Always consider: Is it still necessary for the work to be done out of hours? Is the worker still medically fit to work alone?

Prohibited Lone Working Activities include
- Use of explosive substances or those that emit toxic gases.
- Working in confined spaces.
- Working with exposed live electrical sources.
- Lifting heavy loads.
- Large quantity cryogenic decanting.
- Using unguarded power tools.
- Working with individuals under 18 years of age without a valid DBS certificate.
The full UCL guidance on activities are on the central webpages.

SAFETY TRAINING

UCL has a number of mandatory training modules as well as specialist training modules depending on both your role and activities during your time at UCL and EEE. These need to be kept up-to-date.

Mandatory Safety Training

UCL requires all new starters to complete the following mandatory online safety courses on Day 1.

- UCL Fire Safety
- UCL Safety Induction
- Staff: Information Security (CybSafe)
- Students: Information Security Awareness Training (students only version)
- Data Protection and Freedom of Information
- Workstation self-assessment

- All new starters must complete the Departmental Local fire & general safety induction. These inductions are held twice monthly by the Department Safety Officer (DSO). New starters will receive an email requesting to attend the next available session. New starters should attend the next session running after their arrival. Failure to attend can lead to escalation to line manager and removal of access to areas.

- All new staff and postgraduate students must complete the safety records on their MyInfo page (https://intranet.ee.ucl.ac.uk/myinfo) as soon as possible after the completion of mandatory training and inductions.

Note that visiting staff and students who join the department for more than three weeks are treated in the same way as any of our permanent staff or students for safety training purposes. People visiting for less than at most three weeks are considered guests of the department for safety purposes and they do not have to undertake training. However, they should be always escorted by a staff member and will not be allowed or expected to perform any hazardous tasks that require safety training.

Additional safety training for lab-based staff and PG students

- Local Lab induction: Lab access is only permitted once a suitable, formal lab induction has been provided. Please see your PI/line manager/lab manager for more information
- Principles of Risk Assessment online training is available if you are writing risk assessments.

Role specific health and safety training

Staff members and postgraduate students may require other safety training, depending on your role and responsibilities. These requirements will be documented in the Dept lab manual, facility safety arrangements and/or lab rules and can be discussed with your manager.

- Manual handling and lifting - Manual handling and lifting training
- Compressed gas users - Gas Safety Training
- Liquid nitrogen users - Liquid Nitrogen in the workplace, Safe decanting of liquid nitrogen training
- Laser Users - Laser Safety Awareness training
- Fire Evacuation Marshalls - Fire Training
- First aiders - Emergency first aid at work training

- Managers, supervisors and (PIs) hold a key role in - Safety Risk Management Programme training mitigating health and safety risk

  This list is indicative not exhaustive.

WORKING IN EEE LABORATORIES/ WORKSHOP

Access to labs and workshop

- Access is permitted only to staff and students who have completed all the necessary UCL mandatory safety training, local fire and safety training and have received a local laboratory induction using the local lab induction form to record this.

- A list of laboratory workers declared competent to work in the area must be maintained by the laboratory mentor or PI. The list should be made available in the laboratory in the red safety file.

- Visitors who will spend more than two weeks in the laboratory, should be officially registered as visitors with the department, and be treated as a normal staff for training purposes.

- All Estates and engineer visits must be agreed with the laboratory coordinator at least 24 hours in advance, unless in an emergency.

General Rules

Following general rules must be followed when working in laboratories:

- Follow all safety instructions and workplace procedures carefully.
- Know where the hand wash, eye wash, first aid, fire safety equipment are located.
- Do not eat, drink, smoke, or chew gum.
- Tie long hair back, tuck items that may dangle, including lanyards, scarves, and long beards, into the lab coat.
- Wear a lab coat (signage on door will indicate where this is required).
- Wear safety glasses (signage on door will indicate where this is required).
- Wear appropriate gloves if necessary to protect against burns or contamination.
- Avoid lone working.
- Dispose of waste according to departmental hazardous waste management plan.
- Reports all accidents (including near misses and injuries) to the lab manager and via RiskNET.
- Do not wear headphones, earphones, or other similar devices that block out all sound in the lab. At least one ear must be free to hear alarms and emergencies.
- Do not buy chemicals in quantities larger than those needed. The quantity of hazardous substances stored in a lab should always be kept to a minimum.

Working in EEE workshop is restricted to trained personnel ONLY. EEE workshop safety handbook can be found here.

Competence

To work in the labs unsupervised, all staff and students must complete necessary training. Competence must be determined by PI /supervisor of the person carrying out the work with the assistance from lab mentors and instrument leads. Details on what is considered competent to perform a specific activity must be included in the project risk assessment and local lab inductions must be recorded. Both the individual and the PI/supervisor must agree on the competence of the individual.

Laboratory Safety Folder (Red folder)

All safety and maintenance information for the laboratory should be maintained in the red folder. This information may also be recorded digitally in an accessible online location (for example via SharePoint and MS Teams).

In summary, the folder should contain:

- Emergency contact information
- Local laboratory rules
- Lab induction forms
- A list of authorised lab users and competent persons
- A copy of general laboratory risk assessment
- Specific Risk assessments and COSHH assessments (if applicable)
- Copies of any safe operating procedures for equipment in the laboratory and related training records
- Records of safety inspections
- Records of equipment maintenance and testing

These records must be kept up to date and checked on each annual safety inspection by the departmental safety officer.

HEALTH AND SAFETY INSPECTIONS

Laboratory Inspections

The DSO will arrange for laboratory inspections to be carried out annually against a formal checklist provided by UCL Central Services via RiskNET. Inspections should be carried out by relevant knowledgeable person (s), e.g. DSO, TSM, LSO, CSO. In the inspection, compliance against a list of standard measures is assessed. The areas covered if applicable are;

General Safety: Checking that there are no electrical items which may present a hazard.

Fire and First aid: Checking fire safety, spill equipment, and first aid provision is sufficient and accessible.

Housekeeping and spills: storage of substances and appropriate spill kits and PPE available.

Personnel: Assessing whether users are working safely and understand safety protocols in the lab

Radiation Safety: correct RA and PPE used with RPS notified.

Laser Safety: correct RA and SoW in place, lab is appropriately fitted and set ups are safe with LSO notified

Hazardous substances and materials are chemicals and gas cannisters stored appropriately and COSHH available.

Plant and Equipment: Fume cupboards and laminar flow being used correctly and serviced.

Working at Heights: checking training and equipment.

Pressure systems: are cylinders properly restrained and gas lines correctly used.

Offices/Meeting rooms and kitchen inspection

The DSO will arrange for office, meeting rooms and kitchen inspections to take place every year.

A formal checklist will be used to assess the hazards present in the room. These include:

- Checking general housekeeping and working environment is suitable.
- Checking that there are no electrical items which may present a hazard.
- Ensuring that waste receptacles are being used correctly.
- Checking fire safety, spill equipment, and first aid provision is sufficient.

STORAGE

All items must be stored appropriately. No lab experiments can be carried out in office spaces. Office equipment and activities should remain in offices. Any items found in appropriately stored will be removed and disposed of. Personal items should be kept in offices, not lab spaces.

Cold Storage

- Food and drink must not be stored in the laboratory, including in any laboratory refrigerator.
- All items stored in refrigerators must be clearly labelled and dated.
- Solvents and flammable materials must not be stored in refrigerators unless they are spark free.
- All materials should be removed from cold storage when no longer required and disposed according to the local rules

Any inappropriately stored items or out of date items will be disposed of with no notice, i.e. solvents in a normal fridge or out of date food in a food fridge.

FIRST AID

A list of qualified first aiders in the department and their locations are displayed on each floor in the stairwells and the closest to an area is on the emergency contacts sheets in the labs/offices. It is also available in the responsible persons register held in riskNET and is updated after the termly safety committee.

The first aid kits are kept with each first aider whose responsibility it is to keep it stocked and in date.

An incident report must be submitted after a first aid (and any other safety) incident.

Any individuals who regularly work events, field work or carry out outreach activities may need to be a first aider. Please contact the DSO for how to access the training.

EXTREME WEATHER

The Department recognises the difficulty of staff attending their place of work during periods of adverse weather conditions such as heavy rain fall or extreme heat. EEE is committed to protecting the health and safety of all staff and students.

Responsibility of EEE:

- To ensure the safety of all staff by recommending/implementing strategies in adverse weather and ensuring all staff are treated fairly and individual circumstances are considered in line with UCL's equality statement
- To communicate any changes to normal working to staff effectively
- To ensure the department acts in line with all central UCL's guidance

Responsibility of Staff:

- To not put themselves in unnecessary or inordinate risk while attempting to attend work, however staff should make every effort to attend their usual duties.
- Take reasonable steps to communicate with their line manager regarding delays or inability to attend work as normal.

Options that can be agreed between Line Managers and Staff:

- Working from home if practicable
- Making up time/hours lost within 3 months
- Taking annual leave
- Taking unpaid leave
- A combination of the above

The met office has three levels of warning and EEE will recommend/implement borrowing this scale. The details are:

MET Office Warning	**Significance**	**Extreme Heat**	**Extreme Cold**
None Comfortable	No weather warning.	Staff should continue to work their normal working pattern All buildings open as normal.	
Yellow Slight Discomfort	Possible low-level impacts for some people however most will be unaffected.	If affected WFH if possible (to be arranged with line manager).	
		Take regular breaks, use water fountains to remain hydrated. Set time limits on activity as appropriate and take regular breaks i.e. 10mins every hour. Halt work if feeling unwell, especially if work require a lot of activity/physical exertion.	Ensure your area of work is heated to at least 16◦C, ideally 18-21◦C. Wear appropriate clothing and footwear.
Amber Moderate discomfort	An increased likelihood of impacts of severe weather. Possibility of travel disruption, potential risk to life and property.	WFH if possible (to be arranged with line manager).	
		As in yellow with warning with additional measures: Suspend work if practicable. Ensure physical activities are appropriately risk assessed.	As in yellow warning with additional measures: Reduce drafts i.e. from windows and outside doors. Avoid exposing yourself to the elements i.e. limit activity outdoors.
Red		Work from home unless business critical	

Strong indisposition	Very likely to be risks to life and property with substantial disruptions to travel, energy supplies and infrastructure.	Commuting/ travel to be avoided. Building/areas may be closed – this will be communicated if so.	
		All physical activity ceased unless business critical. If business critical physical work must be carried out, then refer to Amber warning advice.	As in amber warning with the additional measures: If business critical travel is needed, then ensure others not travelling are informed of your whereabouts. Keep your mobile always charged and on you.

In the event of severe weather please keep checking for weather updates from the met office as well as from UCL/ EEE via your work email address.
If you believe your work area's infrastructure requires improvement to deal with severe weather conditions i.e. draughts from doors/windows or A/C units not working please contact: defects@ee.ucl.ac.uk

CHILDREN ONSITE IN EEE

The department recognises that staff may find themselves in circumstances where they bring their children/dependents onto site. The member of staff who has brought the child(ren) onto site is fully responsible at all times.

Younger children should only be taken to low hazards areas (offices, kitchens/cafes, lecture theatres etc), they should not be in high hazard areas such as labs or workshops. Older children who may enter high hazard areas as part of work experience etc must have their activities authorised with the relevant manager/supervisors and be appropriately risk assessed. They must always be supervised in high hazard areas and undergo the appropriate inductions and training.

Please note that UCL has a Special Leave Policy which outlines the paid and unpaid leave UCL parents/carers are entitled to in case of unexpected emergencies involving children/dependents under 18.

Children under 18 who are on site as part of UCL events will be considered in the appropriate planning and risk assessments related to these events.

RISK ASSESSMENTS

All activities in the department should be under an authorised risk assessment. Some risk assessments are department/college wide. All Risk assessments need to be reviewed annually or earlier if there is a major change in circumstances i.e. location changes, personnel changes or equipment changes etc.

GENERAL GUIDANCE

The purpose of a risk assessment is to identify the hazards involved in a procedure, evaluate and set out how those hazards are to be controlled, and to communicate that information to those who need to know.

UCL policy requires that all hazardous activity must have a suitable and up-to-date risk assessment, and these assessments must be recorded in the RiskNET system. Any person who is going to carry out any new activity

involving a hazard must conduct a suitable and sufficient assessment of the risk, and establish any required control measures, **prior** to starting the work.

To be valid, risk assessments must be authorised within RiskNET by a competent person. This person will usually be their supervisor/line manager, however, where someone is working in a lab outside of their supervisor or line manager's direct control, it may instead be the laboratory or facility manager or a delegated deputy (such as an experienced researcher or technician). Any activity that involves a high hazard task also requires authorisation by the department safety officer.

Our most hazardous environments are our department laboratories and research facilities. Each laboratory or laboratory facility should have general risk assessment prepared, which details the hazards anyone with unsupervised access to the area must be aware of and any controls they must follow, a copy of which can be found in the red safety folder.

All laboratory workers are expected to become competent in performing risk assessments. The University's Principles of Risk Assessment eLearning course is accessible to all so they are able to carry out a proper assessment of risks involved and the precautions and controls necessary to ensure the safety of themselves and others.

When is a new Risk Assessment is Required?

If proposed laboratory work falls within the scope of the activities already covered in the laboratory or facility risk assessment, there is no requirement to do a full, separate new assessment. However, line managers and supervisors should ensure that their staff and students are familiar with the hazards & controls and receive any necessary training required by the risk assessment. If the proposed activity does not fall withing the scope of an existing risk assessment a new risk assessment is needed. Alternatively, a preexisting risk assessment can be updated to consider the new activity.

Where an existing risk assessment for a similar task to your work exists in RiskNET, it is both permitted- and encouraged to use this as the basis for your new assessment. Assessments in RiskNET can be copied which create a new unique RA reference number and allows the individual to update and adapt a pre-existing assessment for their activities and environment.

Similar to laboratory risk assessments, certain equipment and specialised processes often have their own safety assessments already prepared. Examples include high power laser systems, X-ray generators, and processes involving hazardous chemicals. Often it is not appropriate for non-specialists to attempt risk assessment for these types of equipment and processes, so you will instead be provided suitable training covering the safe operation and safety controls required by the existing risk assessment.

Creating a new Risk Assessment

If you do have to create a new risk assessment from scratch, how you approach this may vary considerably depending on how specialised the activity is. Below is a useful basic guide to approaching general laboratory work that requires risk assessment. It assumes that you have already determined that a suitable risk assessment does not currently exist in RiskNET and the work does not require specialised assessment.

1. The first step in a new risk assessment for a completely new process should be to draft a very basic procedure; write a step-by-step guide in bullet points describing the process, for example for a lab experiment which instruments/apparatus are involved and how they will be used, etc
2. Next think about the hazards that may be present, and how likely something might go wrong and lead to harm, and record this for each step. It is useful at this stage to consult any safety documentation available e.g., from equipment manufacturers.
3. Then consider the environment the work will take place in- not only the location, but also who else may be working in the area. Review your assessment of the hazards for each step based on this information- how does it affect their severity and how likely they are to cause harm, not only to you but also to others nearby?
4. The next step is to determine your controls. You may find, after consideration, that you can eliminate some hazards just by changing your procedure or moving to a more suitable workspace. A very good rule of thumb is the 'hierarchy of controls':

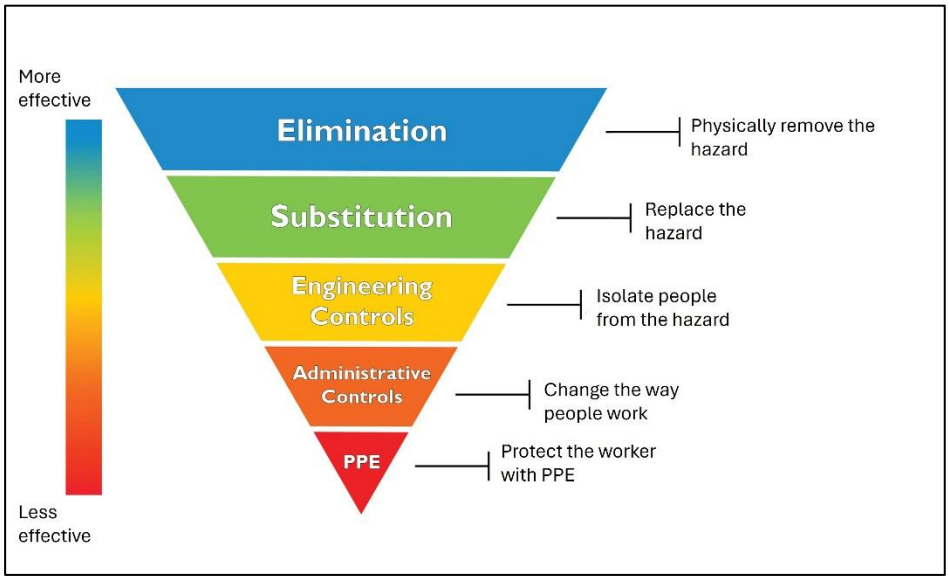


Figure: Hierarchy of controls

Elimination of hazard is the most effective control mechanism. To control hazards, you should always try to remove or reduce them first- by changing your method or substituting in a different process or a safer piece of equipment- before introducing physical or administrative controls. The least effective control is PPE.

5. Finally, review your draft process with the assistance of your supervisor/line manager, or the lab manager (as appropriate) before transferring to RiskNET for formal review.

3rd and 4th Year undergraduate project students in EEE will get a taught lecture session from the DSO at the start of the academic year to support their risk assessment writing. Anybody else needed support can contact the DSO directly. General Risk Assessment in the department

The department has various general risk assessments, where the controls and risks can be used to adapt controls for personal project risk assessments. They can be accessed on riskNET.

- EEE Generic Event Risk Assessment: **RA117591/1**
- UCL Generic Travel Risk Assessment: **RA042911/11**
- EEE Generic Office Risk Assessment: **RA117584/1**

Risk assessments covering generic hazards in the labs should be available in every lab. All researchers working in the lab should read and understand the general RA prior to start working in the lab and recorded on the lab induction form.

Generic EEE risk assessments should be reviewed annually by the competent person or when there is a change in the hazard profile of the lab.

PERSONAL HEALTH

PREGNANCY

Regulations require that if an employee advises their employer in writing that they are either pregnant, have given birth within the previous six months (including still births after 24 weeks), or is breast feeding, the employer must assess the work activities of any such employee and where any risk is identified control that risk.

Any risk assessment involving a pregnant worker (as defined above) should clearly identify this condition. Existing risk assessments should be revised to consider whether additional controls are required and must be reviewed every trimester. Guidance on how to protect females of child-bearing age, pregnant women, new mothers and women who are breastfeeding from health and safety risks at work can be found here

For a list of quiet spaces please see here. The closest appropriate space for expectant mothers and breastfeeding mothers and/or nappy changing is 716, 7th Floor MPEB.

ALLERGIES

Very small quantities of some materials may trigger severe allergic reactions. If you suffer from any Allergies that are present in your workspace you should notify the supervisor in charge of the work, who may refer the research to Occupational Health.

GENERAL HEALTH SURVEILLANCE

Health surveillance may be required if the risk assessment indicates that there is a residual risk to health from the work and there is an identifiable disease/adverse health effect and evidence of a link with workplace exposure and it is likely the disease/health effect may occur.

This most often occurs when exposed to the following hazards:

- Noise or vibration.
- Solvents, dusts, fumes, biological agents and other substances hazardous to health.
- Asbestos, lead, or work in compressed air.
- Ionising radiation.

It is the supervisor's responsibility to appropriately risk assess and inform UCL Occupational Health of work if the risk assessment indicates health surveillance is required. This must be in place prior to the work s

HAZARDS AND THEIR CONTROL

EEE has been classified as a high hazard department due to the nature of its activities and hazards.

ELECTRICAL HAZARDS

Electric shock can kill or seriously injure, and it is necessary to ensure that all electrical equipment is maintained. The maintenance of electrical equipment is also a legal requirement under the Electricity at Work Regulations. All electrical equipment must be regularly checked using the below as guidance before use.

PORTABLE ELECTRICAL EQUIPMENT

- All portable electrical appliances should be maintained by a competent person and periodically inspected. The department organises PAT testing with an external company periodically, this covers office and low hazard areas, if you work in a high hazard area and need external contractor testing please get in contact with the technical services manager. Each piece of equipment will be labelled with an identifying number and the date of last inspection. This information should also be documented on an asset register.
- All new electrical equipment coming into the department must be checked, as soon as it arrives. This is especially important for used equipment either bought second hand or brought in from home.
- All electrical equipment purchased should be of an approved standard e.g. CE, BSI, Kitemarked, or UKCA approved. Any electrical equipment bought from a UK or EU supplier will be constructed to the appropriate standard. If specialised equipment is only available direct from overseas please consult with the DSO and electronics technicians before purchase.
- **No one should construct or modify mains electrical equipment without guidance from technical staff.**
- When equipment is not in use it should be switched off at the mains for safety and to conserve energy.
- **Do not use untested equipment.**

Multi-socket Extensions

- All extension leads must be PAT tested before being used within the department.
- There must be NO daisy chaining (plugging one into another) performed.
- Extension leads must not be overloaded by plugging in high Amp appliances.
- Do not use square mains plug adaptors.
- Do not store extension leads of the floor, if possible, mount them to walls or use elevated
- If a cable crosses a pathway, cable covers or cable protectors must be used.
- Cables must be tied up to avoid trailing.
- Only CE or UKCA extension cables may be used.
- Contact the Facilities Manager if more sockets are required in a room.
- User must check extension leads for damage, e.g. corrosion or breaks, before use.
- All extension cables must be fused.
- Areas next to water must be avoided.
- Areas with a lot of dust should be avoided, however if they must be used, plug socket covers should be installed when not in use.

User Checks

Users of portable electrical equipment should regularly check it to identify any obvious faults:

PLUG – CHECK FOR:	CABLE – CHECK FOR:	CASING – CHECK FOR:
• securely connected to the cable • live, neutral or earth wires visible • pins straight and secure • signs of overheating e.g. scorch marks • cracks or chipped	• badly connected or poorly anchored. • live, neutral or earth wires visible • damaged, broken or cracked • taped joints • outer sleeve not gripped where it enters the plug or equipment?	• loose parts • cracks / damage / signs of having been dropped • corrosion / chemical damage • any signs the equipment has been modified

If any of the above faults are found do not use the equipment but take it to the Technicians based in 6.12, MPEB for repair.

Portable Heaters

Portable heaters are not allowed in the department.

Electric shock

Do not touch anyone who has suffered an electric shock unless you are sure they are no longer in contact with the live object, or the power has been switched off. If it is not immediately possible to switch off the power and they are still in contact with the object, try to pull them away from it using something non-conductive (e.g. wooden broom or an extension cable).

Immediately contact your nearest First Aider if you or a colleague receives a painful electric shock. Even if there appears to be no injury, internal burns and heartbeat irregularities are possible.

LASERS

-The Departmental Laser Safety Officer must be informed before a new laser device is brought into the department. Evidence of consultation with the LSO needs to be proven when submitted a purchase request.

- All Class 3R, 3B and 4 lasers must be registered with the University Laser Protection Officer (ULPO) by completing a laser registration form and added to the Department's Artificial Optical Radiation Inventory managed by the Laser Safety Officer (LSO).

The central UCL Laser Safety SharePoint contains guidance, information and copies of required documents.

- Suitable and sufficient laser risk assessment should be carried out before starting work with any laser. Specialist risk assessment forms for Class 1, 2, and Class 3R, 3B, 4, are available on RiskNET under the **'Specialist Risk Areas'** tab.

- All laser users must be aware of the hazards associated with the laser they intend to use.

- All laser users must attend UCL 'Laser safety awareness' course prior to start working with lasers.

- If practicable, the laser laboratory should have a high level of illumination that will minimise pupil size. To enhance illumination and reduce specular reflections, walls, ceiling, and fittings should be painted with light coloured matt paint.

-Reflecting surfaces, such as glass, should be avoided.

-Windows should be kept to a minimum and may need to be covered with non-reflective blinds. These blinds should be non-reflective and adequately fire-resisting, where higher-powered lasers are used.

- Remove any reflective jewellery.

- Use beam dumps to terminate any stray beams.

- Ensure optical components are secure i.e. bolted to the table or properly clamped.

- Keep beams horizontal.

- Always keep your head above the level of the beam.

- Fully enclose the beam if possible; partially enclose the beam if full enclosure is not practicable.

- If enclosure and interlock is not practicable then this must be justified, and it must be detailed how risks to persons unexpectedly walking into the room are controlled.

- Laser eyewear must be suitable for the wavelength, power and type (pulsed/continuous) of beam.

- Laser eyewear must be stored carefully when not in use (e.g. in designated wall mounted holder) and not left on the bench.

-UCL laser safety guidance can be found here (https://www.ucl.ac.uk/safety-services/sites/safety-services/files/laser-guidance.pdf).

IONISING RADIATION

A radiation risk assessment and set of local rules must be signed off by the RPS before any purchase is made. Equipment purchased without permission will be refused delivery and returned to the supplier, with all costs falling on the purchasing account.

X-ray equipment found on site without permission will be considered under the disciplinary policy.

Constructing equipment for the express purpose of producing X-rays is strictly prohibited.

Any work that may produce incidental X-rays (very high voltages in vacuum equipment) should be referred to the RPS at the planning stages. 3

Receiving or purchasing any sealed or unsealed ionising radiation sources is strictly prohibited

WORKSTATION- DISPLAY SCREEN EQUIPMENT (DSE)

The risks associated with DSE use are postural problems (leading to upper limb disorder), visual problems (eyestrain), fatigue, and stress. These can generally be avoided by adopting a good working posture (e.g. adjust desk and monitor) which minimises repetitive movements and strains, ensuring there is good environmental lighting (e.g. adjust brightness and contrast on the screen), and taking frequent short breaks (don't sit in the same position for long periods).

There is no evidence that disease or permanent damage to eyes or eyesight can be caused by DSE use. However, any uncorrected visual defects may lead to temporary eye strain when using DSE. UCL offers free eye tests to all employees (not research students) under the Eye Care Scheme. (https://www.ucl.ac.uk/human-resources/eye-care-benefits).

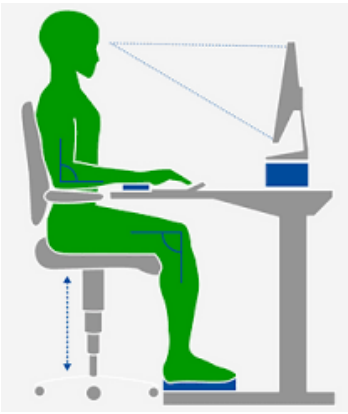


Figure: Diagram indicating good posture

- DSE assessment should be completed by full time staff, where the display system is used for continuous periods of an hour or more. Research students assigned a desk will get a DSE compliant workstation and only need to carry out a DSE assessment if the set up does not meet their needs.
- It is important to follow the principles for setting up a good workstation both when on campus or working remotely. You should complete a workstation assessment on RiskNET for your contracted place of work.
- When you submit DSE assessment, it goes to your manager if there are any issues. You are responsible for making sure your manager follows up on your DSE. If you are a line manager make sure you login and sign off after providing solution.

CHEMICALS

COSHH Regulations

The Control of Substances to Health Regulations 2002 (COSHH) provides a legal framework to protect people against health risks from hazardous substances used at work. This is done by considering their hazardous properties, how they cause harm, the ways they are used and how to control the risks.

A COSHH form for each chemical in your lab must be carried out prior to using the substance. This will inform your storage, usage and disposal methods. Appropriate storage and PPE must be used with consideration made for all users of the space. More information can be found on the safety intranet or via the chemical safety officer.

Purchase and Storage of Hazardous Chemicals

No hazardous chemicals are to be purchased unless an authorised COSHH assessment has been prepared for the proposed work involving those chemicals.

When received, chemicals must be kept in a secure environment, unpacked and transferred to appropriate storage as soon as practicable. The storage or secondary container they are transferred into must have the appropriate hazard labelling.

Staff and students who are planning new work using hazardous chemicals should discuss this with the Lab Safety Co-ordinator for the proposed work location **before** ordering the chemicals. You can also seek advice from the Chemical Safety Officer.

Care should be taken to also consider the chemical products of the proposed process, and ensure the hazards and controls associated with these new products have also been assessed. Products that are retained, including any small quantities retained as research samples, must be clearly labelled, and treated just like any other hazardous chemical in all respects. They must be stored appropriately: **never in offices.**

Any hazardous materials found without a supporting COSHH assessment, without a clear owner, or stored inappropriately will be confiscated and immediately disposed of with no notice.

Certain chemicals are reportable under the *Control of Poisons and Explosives Precursors Regulations 2015.* Staff or students wishing to use these chemicals must discuss their use with the Chemical Safety Officer before purchasing or transferring to the department. Lab Safety Coordinators should check against this list for new work involving chemicals and refer to the Chemical Safety Officer as necessary. The full list of controlled chemicals can be found by following this link. A number of chemicals are also monitored as drug precursors, in these cases, usage of these materials **must** be always tracked and accounted for. Department usage of these materials is regularly audited by Safety Services.

EMERGENCIES

Project supervisors must consider possible issues and make sure everyone knows the procedures during an emergency involving hazardous chemicals. Things to consider are:

- **P**rocedures to be followed if there is a leak or spill of flammable material and make sure people know and understand them.

- If special first-aid facilities or equipment are required then departmental first aiders need to be made aware of this.

These considerations must be documented in the lab safety folder and all users of the laboratory need to trained and inducted against this protocol.

CHEMICAL SPILL PROCEDURES

- A spillage kit suitable for the types of chemicals being handled, as well as the correct type of Personal Protective Equipment (PPE) for spill clean-up should be available in all wet laboratories.
- Information on handling spillages of specific hazardous chemicals must be included in the laboratory risk assessments.

Example Spill cleaning procedure:

1.The member of staff/researcher first on the scene must immediately alert other people to keep a safe distance away.

2. Isolate spill and consider sealing off the area if possible and displaying warning signs on the doors. If there is a possibility the chemical could seep to the floor below, the occupants must be warned and evacuated.

3. If a flammable liquid is spilt, eliminate ignition sources, such as naked flames and do not use electrical switches in the immediate area, as a spark from the switch may ignite the spill.

4. Ventilate area, open windows where possible and close doors to avoid vapours spreading. Opening LEV arms and fume cupboard sashes can increase the air exchange rate in the lab.

5. Assemble the spill kit equipment and PPE then make preparations to deal with the spill.

6. Protect floor drains or other means for environmental release. Spill socks and absorbents may be placed around drains, as needed.

7. Contain and clean-up the spill according to type of substance spilt and information on handling spillages of specific hazardous chemicals included in your laboratory risk assessments and MSDS information sheets.

8. When spilled materials have been absorbed, use brush and scoop to place materials in an appropriate container. Polyethylene bags may be used for small spills.

9. Identify the material as Spill Debris identifying name of the chemical(s) and affix a label to the container. Dispose of contaminated waste chemicals safely.

10. Report all spills using the online the Incident/Accident report form and inform the DSO.

DUST AND FINE POWDERS

- Work that generates dust (e.g. all open cutting machinery in the workshop) should have local extraction and filtration.
- Sand blasting should take place in a filtered enclosure and substate to contain less than 1% silica.
- The workshop has a dedicated area for dusty work, with local extraction to exterior. All work that may cause large amounts of dust and particulates should be carried out in this area.
- A suitable facemask appropriate for the work (which fits properly) should be worn.
- Doing the work in a standard fume cupboard is not an effective long-term solution as the dust is likely to settle out in the duct system.

- Many substances which are not normally considered flammable can when airborne as a dust cloud create a flammable or explosive atmosphere.

ASBESTOS

- Breathing air containing asbestos dust can lead to asbestos-related diseases. These are mainly cancers of the chest and lungs.

- Any worker asked to carry out any operation in the department that brings them into contact with asbestos should contact the Departmental Safety Officer.

- Under NO circumstances should any asbestos based materials be used in the department.

- If you uncover any hidden material or dust which you suspect may contain asbestos, stop work and get advice. Ducts and access panels in the building may conceal areas containing asbestos dust. Where the risk is known warning labels will be found applied to panels.

- Always be especially careful when working with old insulation board, ceiling tiles, cement sheeting and other material, which may contain asbestos. If you have to drill, cut, sand, or handle these materials, treat them as if they contained asbestos.

MANUAL HANDLING

Hazardous manual handling operations should be avoided as reasonably practicable.

If staff regularly are involved in handling of heavy items, the UCL Manual Handling Course must be completed. The course details proper technique for carrying heavy items and helps protect staff /researchers from developing injuries.



MANUAL HANDLING AND DELIVERIES

When items are delivered, please ensure that the correct manual handling training techniques are implemented. If you regularly receive large delivery items, you will need carry out the training.

For occasional large delivery items please ensure that you contact the technical team who will provide trained members of staff to assist with the manual handling of the delivery.

Please note that deliveries via inaccessible delivery modes i.e. no tail lift on delivery vehicle for heavy/bulky items will have the delivery rejected and appropriate redelivery will have to be arranged.

WORK AT HEIGHTS

A risk assessment should be conducted before working at height, taking into account the likelihood of a fall and the severity of the likely injuries. No person working at heights should work alone.

- All ladders must be securely lashed or attended by another person.
- Ladders should only be used as a work platform when the short duration or low risk of the work do not make a more stable platform (such as a tower) justified.

Ladders to be checked regularly and a record kept.

Use of the hoist in EEE by trained users only. Workshop to maintain.

STRESS (MENTAL ILL HELATH)

Staff may experience periods of pressure at work, and short periods of pressure are not necessarily of concern. Stress can impact the physical and mental health of staff, as well as their behaviour, performance, and relationships with colleagues. A self assessment form is available to all staff.

The risk from sustained and/or excessive pressure without the opportunity to recover should be assessed. Managers should complete a stress risk assessment with the member of staff present when a member of staff raises concerns over stress. This can be facilitated by the dept wellbeing champion or an appropriate MHFA.

BEING WELL AT UCL

UCL Workplace Health support the health and wellbeing of staff and PhD students. They deliver evidence-based and inclusive occupational health and wellbeing advice and services. More information regarding UCL Workplace Health can be found here. You can also contact the wellbeing champion.

PURCHASE, DELIVERY OR PRODUCTION OF HAZARDOUS EQUIPMENT AND CHEMICALS

The following covers equipment being purchased in the department. For the purchase of any second hand equipment please fill in the departmental Purchase of Second Hand Equipment Form.

MAINS-POWERED ELECTRICAL GOODS

Mains powered electrical items brought on site must receive a Portable Appliance Test (PAT) before use. Contact the teaching lab technical team for assistance. Equipment found without valid PAT may be turned off and confiscated without notice. The teaching technician team can be contacted directly for ad-hoc PAT testing.

If a piece of equipment has not been used in more than 5years and is being recommissioned it will need to undergo servicing and a PAT test before being put back into use.

Exceptions to this rule:

• Equipment brought temporarily on site by contractors or service engineers that will be used only by the contractors or service engineers.

• Equipment designed for outdoor use & regular transport must have an in-date PAT, however it does not need to be retested each time it is brought on-off site.

• Equipment transferred temporarily between departments/units of UCL must have a valid PAT. However, a retest is not required if an in-date PAT has been performed by the donating UCL department/unit.

• Minor mains powered items brought on site for short periods for personal use (e.g., phone chargers) may be used without a PAT, at the user's own risk. However, any items that will remain on site for an extended period (e.g., coffee machines) must have a valid PAT.

All mains powered items transferred on site should be checked for obvious damage to cables or plugs before turning on. Should any damage be found, it must be passed for repair and receive a PAT before being used again- this overrules any of the exceptions above.

PAT responsibility for equipment held in common by research collaborations across multiple UK institutions/companies should be agreed in writing. Should any such equipment be received without a valid PAT, by default the responsibility will fall on EEE staff to arrange testing prior to use. Equipment received/returned from outside the UK must always receive a new PAT on arrival.

IMPORTANT: Any constructed mains powered equipment should also be tested and have a valid PAT before regular use. Note the construction and testing of such equipment must take place in laboratories only; any found in offices may be turned off and confiscated without notice.

Hazardous chemicals

No hazardous chemicals are to be purchased unless an authorised COSHH assessment (Control of substances hazardous to health) has been prepared for the proposed work involving those chemicals.

When received, chemicals must be kept in a secure laboratory environment, and unpacked and transferred to appropriate storage as soon as possible. They should not be left in their transport packaging. The storage or secondary container they are transferred into must have the appropriate hazard labelling. **They must never be kept in offices at any time**.

Staff and students who are planning new work using hazardous substances should discuss this with the Lab Safety Co-ordinator for the proposed work location before ordering any materials.

Care should be taken to also consider the chemical products of the proposed process, and ensure the hazards and controls associated with these new products have also been assessed. Products that are retained, including any small quantities retained as research samples, must be clearly labelled, and treated just like any other hazardous chemical in all respects. They must be stored appropriately: never in offices. Any hazardous materials found without a supporting COSHH assessment, without a clear owner, or stored inappropriately will be confiscated and immediately disposed of.

Certain chemicals are reportable under the Control of Poisons and Explosives Precursors Regulations 2015. Staff or students wishing to use these chemicals must discuss their use with the Chemical Safety Officer before purchasing or transferring to the department. Lab Safety Coordinators should check against this list for new work involving chemicals and refer to the Chemical Safety Officer as necessary. A number of chemicals are also monitored as drug precursors (see the table).

In these cases, usage of these materials must be always tracked and accounted for. Department usage of these materials is regularly audited by Safety Services.

Drug Precursor - Category 2 substances Acetic anhydride Drug Precursor - Category 3 substances Acetone* Phenylacetic acid Ethyl ether Anthranilic acid Methyl ethyl ketone Piperidine Toluene* Potassium permanganate Sulphuric acid* Hydrochloric acid* 2 3)

New Class 3 and 4 laser systems

All Class 3R, 3B and 4 lasers must be registered with the University Laser Protection Officer (ULPO) by completing the UCL laser registration form and added to the Department's Artificial Optical Radiation Inventory managed by the Department Laser Safety Officer (LSO).

Equipment on short term loan or brought by visitors needs to registered at the earliest opportunity. It does not include equipment brought on site and used only by service engineers/contractors. The LSO must be informed of any purchase or transfer of new class 3R, 3B and 4 lasers before the order has been placed or any equipment has been transferred. Replacing or updating existing laser equipment does not need pre-approval from the LSO unless the class of the laser changes.

An approved laser risk assessment and scheme of work document must be available for the work before any new laser is brought on site, and the proposed location must have a suitable laser management and training system in place prior to the laser being installed.

Remember if new laser work is planned- work either substantially different from existing work in a laser area or proposed in an area that is not currently a laser area- the LSO must be informed at the earliest stage. New Class 3 and 4 laser systems found on site without registration/prior notice will be considered under the disciplinary policy.

Laser systems constructed on site.

The controls above cover laser systems not laser components. For example, a laser diode component does not count as a laser system until it has been assembled in a set-up and wired to a suitable laser driver. Laser registration in such cases should take place at the planning stage for the assembled set up; it is not necessary to register all laser components at the purchase stage.

Like any other class 3 or 4 laser systems, any found assembled on site without registration will be considered under the disciplinary policy.

Contact the Department Laser Safety Officer (LSO) for further advice.

Effective Class 1 enclosed laser systems

Some equipment includes what would normally be class 3 and 4 laser systems, but they are incorporated into sealed or interlocked enclosures that are certified by the manufacturer as effective class 1, as the laser beam is never accessible to the user. These items do not need to be registered, however, if you wish to purchase or loan this type of equipment you must seek advice from the LSO at the earliest opportunity, as certain safety control measures and procedures will still be required.

New X-ray equipment

The purchase of any X-ray generating equipment must be approved by the University Radiation Protection Officer (RPO) before an order is raised. Colleagues planning such work must first discuss the research need with the Department Radiation Protection Supervisor (RPS), who will seek approval on their behalf with the RPO.

A radiation risk assessment and set of local rules must be signed off by the RPS before any purchase is made. Equipment purchased without permission will be refused delivery and returned to the supplier, with all costs falling on the purchasing account.

X-ray equipment found on site without permission will be considered under the disciplinary policy.

Constructing equipment for the express purpose of producing X-rays is strictly prohibited.

Any work that may produce incidental X-rays (very high voltages in vacuum equipment) should be referred to the RPS at the planning stages. 3

Receiving or purchasing any sealed or unsealed ionising radiation sources is strictly prohibited

FAULTY OR DAMAGED EQUIPMENT

Faulty or damaged equipment that is identified must be quarantined so it is taken out of use and labelled appropriately to inform others it cannot be used. The following process should be followed:

- **Step 1** – The equipment has developed a fault or defect and is not safe to use. Fault or defect of the equipment will be identified during a visual inspection prior to use or during or PAT test conducted by a competent person.
- **Step 2** – Faulty or defective equipment must be switched off immediately and, if it is safe to do so, disconnected or unplugged from the socket.
- **Step 3** – Place warning sign(s) visibly on the equipment. Apply additional control measures to secure the cable such as locking/cutting/removing.
- **Step 4** – Arrange for repair and re-test or replace equipment. Repair must be conducted by a competent person.
- **Step 5** – Following successful repair, remove warning sign(s) and insert plug into socket.

It is good practice to file all repairs so common faults can be identified and addressed. Ensure local asset lists are updated appropriately.

VERSION CONTROL HISTORY

Previous version is always updated and the new version will be saved with the last date of revised

Date	Version	Prepared By	Approved By	Reason for Amendment
12.11.2024	1.0	Roshni Harkishin	John Mitchell	Standard update for new academic Year.
26.11.2024	1.1	Roshni Harkishin	John Mitchell	Added the procurement of second-hand equipment information.
18/03/2025	1.2	Roshni Harkishin	John Mitchell	Added Children onsite in EEE
30/06/2025	1.3	Roshni Harkishin	John Mitchell	Added Extreme Weather Section.
09/03/2026	1.4	Roshni Harkishin	John Mitchell	Updated for 2025/2026, Out of Hours working guidelines added sign off at T2 DSC 2025/26. DSO absorbed quarantine process for damaged/faulty equipment SOP into Safety Handbook.
03/08/2026	1.5	Roshni Harkishin	John Mitchell	Added information regarding the SMT report send to HoD