UTC Cambridge
Health and Safety Handbook

UTCC Health and Safety Officer: Director of Science (Alistair Easterfield)
UTCC Designated Governor: Nigel Slater

Associated documentation

Crisis Management and Business Continuity Policy
Management of Educational visits and Learning Outside the Classroom Policy
First Aid Policy
Fire Policy and Procedure
Health, Safety & Welfare Policy
Induction Policy

UTC Cambridge Vision

UTC Cambridge: Delivering Future Scientists

UTC Cambridge Mission

Through an innovative curriculum, developed with leading scientists from industry and academia, UTC Cambridge builds bespoke learning solutions delivered in a state of the art science and technology environment that empowers students to manage their academic and career development.

UTC Cambridge Values

We set ourselves challenging goals, are agile and resilient, to achieve our personal best.
By respecting one another we enhance our experience and benefit from different perspectives.
We take individual responsibility, ensuring team delivery.
By respecting our environment, our world, we make a difference.
We celebrate positive contribution and aspire to excellence.
We are morally and ethically responsible in scientific and environmental innovation.

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1. Introduction

This document is maintained by the Health and Safety Officer. It is copied (emailed) to all new members of staff, i.e., teaching staff, technicians, support staff, administrative staff, trainees, etc. A reference copy, together with various Appendices, is kept in Reception and is available for consultation by staff and for inspection by visiting HSE inspectors or a representative of the Governors. A copy of this document has been lodged in the Business Manager's office. UTC Cambridge subscribes to CLEAPSS and access is available to all guidance notes, hazcards, bulletins etc. through the College intranet.

2. General

2.1. Responsibilities

The Board of Governors has the ultimate duty to ensure the health and safety of employees and others on the site. The task of overseeing health and safety on this site has been delegated by the Governors to Professor Nigel Slater (lead Governor for Health and Safety).

Staff with particular responsibility for Health and Safety include:
Principal (Melanie Radford)
Health and Safety Officer (Alistair Easterfield)
Fire Safety Officer (Lizzie Andrews)
Radiation Protection Advisor (Colin Bashford)
Biological Safety Officer (Alistair Easterfield)
External Trips and Visits (Colin Bashford)

Full details and contacts for those with specific responsibilities can be found in Appendix 1.

However, responsibility for Health and Safety resides with all staff and students:

1. UTC Cambridge staff (teaching and non-teaching) have a general duty to take reasonable care for the health and safety of themselves, of other members of staff, of pupils and visitors. They have specific duties: to be familiar with this health and safety policy, its updates, the texts to which it refers and any Appendices. They must cooperate with UTC Cambridge instructions, observe the requirements of this policy and fulfil any special responsibilities it gives them. They must cooperate with colleagues in their specific health & safety duties. They have a duty to report to local management any failure of equipment that has a health & safety function.

2. Staff practice must set a good example to pupils and be consistent with pupil rules, this is of particular relevance when working in laboratories, e.g., over the wearing of eye protection.

3. Staff must be familiar with emergency drills and with the location in each room of: the escape route; fire-fighting equipment; and in laboratories of the eye wash station the main gas cock; the main electricity switch, emergency shower and the nearest spill kit.

4. Rooms must be left safe. Special arrangements must be made for equipment which has to be left running overnight and hazardous equipment which has to be left out. In general, all gas taps should be completely turned off and all mains-operated apparatus switched off.

5. Eating, drinking (including drinking from water bottles) and the application of cosmetics should not take place in laboratories, storage areas or preparation rooms unless an area in which it is safe to do so has been created.

6. When staff are alone nothing should be done which could lead to an accident requiring remedial measures. A teacher or technician must assess risks very carefully before conducting any practical operation in such circumstances.

2.2. Asbestos Management

The UTC Cambridge building was erected in 2013 and so does not contain any asbestos.

2.3. Communicable Diseases

Public Health England advice will be followed as laid out in *Guidance on infection control in schools and other childcare settings.* A summary of advice for specific ailments can be found in Appendix 2. Care must be taken where there has been a spillage of blood, faeces, saliva, vomit, nasal and eye discharges. These must be cleaned up immediately using an agent that acts as both a detergent and disinfectant using cloths/paper towels, these should then be disposed of as clinical waste.

2.4. Compressed gases

Gas cylinders should only be moved or set up by trained staff, under no circumstances should these operations be performed by students. Cylinders must be purchased from a reputable supplier and used with appropriate regulators, oil and grease should never be used on connections. Any rooms containing gas cylinders should be appropriately labelled.

2.5. Confidential Care Plans

In certain situations individual students may require a confidential care plan to support them during their time at UTC Cambridge as a result of specific health related issues. It is the responsibility of the Director of Student Progress to ensure these are in place. When drawing up a confidential care plan it is important that it takes into account the health and safety of the carer, particular areas that may need to be addressed would be manual handling, infection risks, medication and child protection, it is likely that a risk assessment may also be required. Confidential Care Plans will be recorded using 'Medical Tracker'

2.6. Contractors

The Business Manager will be responsible for ensuring that all contractors are made aware of the College's Health and Safety Policy and relevant information such as fire evacuation plans and first aid provision. Where external work is being carried out the Business Manager will be responsible for collecting and keeping on file appropriate risk assessments, these should cover both the risk to the contractors themselves whilst on site and that to the College's own staff and students.

2.7. Control of Substances Hazardous to Health (COSHH)

COSHH requires that a risk assessment is performed for any substance that may cause harm, this includes laboratory chemicals, biological agents, cleaning products, etc.

2.8. Display Screen Equipment (DSE)

Work stations should be well designed so that arms are almost horizontal, eyes about level with the top of the screen and space under the desk for leg movement. The work station should have enough space for documents and other equipment to be suitably arranged and glare should be avoided.

When working at a computer sit up straight with your chair close to the desk, leave space in front of the keypad to rest your forearms when not typing and try to keep your wrist straight. You should ensure that fonts are of a size that can easily be read and you should take regular breaks.

2.9. Electrical Safety

To meet the requirements of the *Electricity at Work Regulations*, UTC Cambridge requires portable electrical equipment to be inspected and tested regularly. Heads of Department together with the Business Manager have the function of seeing that this happens. Testing is completed as necessary.

The Technicians should be trained by CLEAPSS and should be able to complete all PAT testing. Completed schedules are kept in the *Health and Safety folder* on the Curriculum Drive and are available for staff reference and for inspection by the Governor's representative or an HSE Inspector.

2.10. Electromagnetic fields (EMFs)

Exposure to high levels of EMFs can lead to effects that may be irritating or unpleasant. UTC Cambridge does not contain any equipment that is likely to produce high level EMFs. Low level EMFs (such as those produced by communication devices (WLAN, Bluetooth), audio visual equipment and power tools) may interfere with active body worn medical devices such as pacemakers and insulin pumps. If staff or students have such devices an individual risk assessment is required, this will be done by the Safety Officer in conjunction with the Director of Student Progress or Business Manager.

2.11. Fire

UTC Cambridge has a separate policy that outlines Fire Safety and Evacuation, please refer to this.

2.12. First Aid

UTC Cambridge has a separate First Aid Policy, please refer to this.

2.13. Induction

UTC Cambridge has a separate Policy that outlines the procedure for new staff induction, please refer to this.

2.14. Legionnaires' disease

A biannual Legionnaires' risk assessment is performed by a competent person. Temperature of water supply systems are monitored by Munro. Water tanks and heating systems are cleaned, chlorinated/disinfected and tested by Munro on an annual basis. Showers are run on a weekly basis. Records of all testing and maintenance are kept in a folder at reception.

2.15. Lone Working

Where ever possible lone working should be avoided, and meetings with parents or other outside agencies should never be arranged when there is no one else around. If necessary think about locations of meetings at times when there are few other people around to ensure that they occur in occupied areas of the building (i.e. the Learning Plaza). Meetings with students in the absence of other adults should never be conducted due to child protection implications.

If on odd occasions work is required out of hours (this is likely to be limited to SLT or maintenance staff due to building security implications) it is important that the member of staff notifies a third person when and where they will be working, when they expect to finish and what to do if there is a problem (normally the contact details of another member of SLT). If the third party has not heard from the lone worker by this time they should have follow the instructions of what to do if there is a problem.

2.16. Manual Handling

All regular operations involving lifting or carrying equipment, pushing trolleys, etc. will be assessed to see if any may give rise to risks of injury (*Manual Handling Operations Regulations*) by the technical staff.

Occasional (i.e., one-off) manual-handling operations will be assessed by the staff member(s) before attempting them. Problems will be reported to the Health and Safety Officer.

2.17. Personal Emergency Evacuation Plans (PEEPs)

A PEEP is a Personal Emergency Evacuation Plan. It is a bespoke 'escape plan' for individuals who may not be able to reach an ultimate place of safety unaided or within a satisfactory period of time in the event of any emergency.

PEEPs may be required for staff and students with:

- Mobility impairments
- Sight impairments
- Hearing impairments
- Cognitive impairments
- Other circumstances

A temporary PEEP may be required for:

- Short term injuries (i.e. broken leg)
- Temporary medical conditions
- Those in the later stages of pregnancy

The underlying question in deciding whether a PEEP is necessary is "can you evacuate the building unaided, in a prompt manner, during an emergency situation?" If the answer is "no", then it is likely that a PEEP is needed.
If you need assistance evacuating from a building, even temporarily, it is your responsibility to inform and complete a PEEP with the Business Manager. The completion of the PEEP will decide upon the best escape plan for you in an emergency. This PEEP needs to be reviewed on a regular basis. For students responsibility for completing PEEPs rests with the Director of Student Progress, these need to be communicated to teaching and support staff so all relevant staff are aware of actions that they need to take.

2.18. Personal protective equipment

UTC Cambridge accepts the duty to provide eye protection, gloves, laboratory coats, etc. for employees and students where the risk assessment requires them (*Personal Protective Equipment at Work Regulations*). Prescription safety spectacles are to be ordered from any optician and UTC Cambridge will meet the extra cost of the safety features. Laboratory coats are purchased by UTC Cambridge.
UTC Cambridge expects eye protection to be available for students and visitors. Goggles or face shields to chemical-splash standard are worn whenever there is a risk to the eyes.
The condition of the eye protection is checked regularly by the technicians.
In addition to laboratory work there may also be requirements for PPE to be worn by other staff (for example maintenance), if this should be identified by risk assessment and the Health and Safety Officer be advised.
Particular care should be taken with laboratory gloves as some people can develop severe allergies to latex and some cross linkers used in the manufacture of nitrile gloves. Furthermore some gloves can become slippery when wet (particularly polythene) can become hazardous when working with sharps (for example during dissection). It is also important to ensure that gloves selected are compatible with any chemicals used. Under no circumstances should gloves be used when staff/students are using naked flames.
Before using gloves a risk assessment should be made as to whether gloves are required, and if so, which variety is most suitable. For routine work latex should not be used, powdered gloves should also be avoided. Staff and students should be asked if they suffer from any allergies before work commences and told to wash their hands on completion of the work.

2.19 Pregnancy and illness

If a member of staff becomes pregnant or suffers from an illness that may put their own or another person's health and safety at risk they should inform their line manager. The line manager will inform the Business Manager who will liaise with the Health and Safety Officer to ensure appropriate risk assessments are carried out and work tasks amended as required.
If a student becomes pregnant or suffers from an illness that may put their health and safety at risk they are asked to inform the Director of Student Progress who will liaise with the

Health and Safety Officer to ensure appropriate risk assessments are carried out and risks are removed.

2.20 Promoting Emotional Wellbeing and Managing Work Related Stress

UTC Cambridge fosters a working environment that protects the physical and mental well-being of its staff as set out in the UTC Cambridge Health and Safety Handbook. Wellbeing is about feeling good and functioning well. As an employer, UTC Cambridge has a duty to ensure the health, safety and welfare of its employees as far as reasonably practicable, which includes work-related stress. This duty extends only to those factors which are work-related and within UTC Cambridge's control.

UTC Cambridge accepts the Health and Safety Executive definition of work-related stress as "the adverse reaction a person has to excessive pressure or other types of demand placed on them". There is an important distinction between 'reasonable pressures' which stimulate and motivate and 'stress' where an individual feels they are unable to cope with excessive pressures or demands placed upon them.

UTC Cambridge recognises that there are many sources of work related stress and that stress can result from the actions or behaviours of managers, employees or students.

The Health and Safety Executive have produced a number of Management Standards which cover the primary sources of stress at work that, if not properly managed, are associated with poor health and well-being, lower productivity and increased sickness absence. These are:

- Demands – i.e. workload, work patterns and the work environment.
- Control – i.e. how much say the person has in the way they do their work.
- Support – i.e. the encouragement, sponsorship and resources provided by the organisation, line management and colleagues.
- Relationships – i.e. promoting positive working to avoid conflict and dealing with unacceptable behaviour.
- Role – such as whether people understand their role within the organisation and whether the organisation ensures that they do not have conflicting roles.
- Change – such as how organisational change (large or small) is managed and communicated within the organisation.

UTC Cambridge managers acknowledge the potential impact that work has on an individual's physical and mental health, and that there is a persuasive business case as well as a moral and legal duty for taking steps to promote employee well-being as far as reasonably practicable. UTC Cambridge is committed to fostering a culture of co-operation, trust and mutual respect, where all individuals are treated with dignity, and can work at their optimum level. UTC Cambridge recognises that work-related stress has a negative impact on employees' well-being, and that it can take many forms and so needs to be carefully analysed and addressed at an organisational level.

UTC Cambridge will promote the well-being of employees by:

- Creating a working environment where potential work-related stressors as far as practicable are avoided, minimised or mitigated through good management practices, effective policies and staff development.
- Increasing managers' and employees' awareness of the causes and effects of stress.
- Developing a culture that is open and supportive of people experiencing stress or other forms of mental ill-health.
- Developing the competence of managers through continuous professional learning.

- Engaging with staff to create constructive and effective working partnerships both within teams and across the School.
- Establishing working arrangements whereby employees feel they are able to maintain an appropriate work life balance.
- Encouraging staff to take responsibility for their own health and well-being through effective health promotion programmes and initiatives.
- Encouraging staff to take responsibility for their own work and effectiveness as a means of reducing their own stress and that of their colleagues.

Responsibilities for implementing Health and Wellbeing at UTC Cambridge

The senior leadership team will:

- Support steps taken to develop a culture of co-operation, trust and mutual respect within UTC Cambridge.
- Champion good management practices and the establishment of a work ethos within UTC Cambridge which discourages assumptions about continuous long and excessive working hours, likely to cause stress and which enables employees to maintain a reasonable "work life balance".
- Promote effective communication and ensure that there are procedures in place for consulting and supporting employees on changes in the organisation, to management structures and working arrangements at both a UTC Cambridge-wide and departmental level.
- Encourage initiatives and events that promote health and well-being.
- Managers will:
- Treat individuals reporting to them with consideration and dignity, and will promote a culture of mutual respect in the teams they manage. They will not permit unacceptable behaviour and will take decisive action when issues are brought to their attention.
- Ensure that there is good communication within their team and there are opportunities for individuals to raise concerns about their work, seeking advice from the HR/Business Manager and the Health and Safety Officer at an early stage where concerns are raised.
- Adhere to the sound management principles set out in the UTC Cambridge's policies and procedures.
- Attend training as appropriate in order to increase their awareness of the causes and effects of work-related stress.
- Co-operate with the HR/Business Manager and the Health and Safety Officer to ensure that risk assessments are undertaken for roles or working practices that may give rise to work-related stress.
- Encourage their staff to participate in events and initiatives undertaken by UTC Cambridge to promote well-being and more effective working.
- Take action in the interests of all their colleagues where performance by a member of staff may cause stress to their colleagues.

Employees will:

- Treat colleagues and all other persons with whom they interact during the course of their work with consideration, respect and dignity.

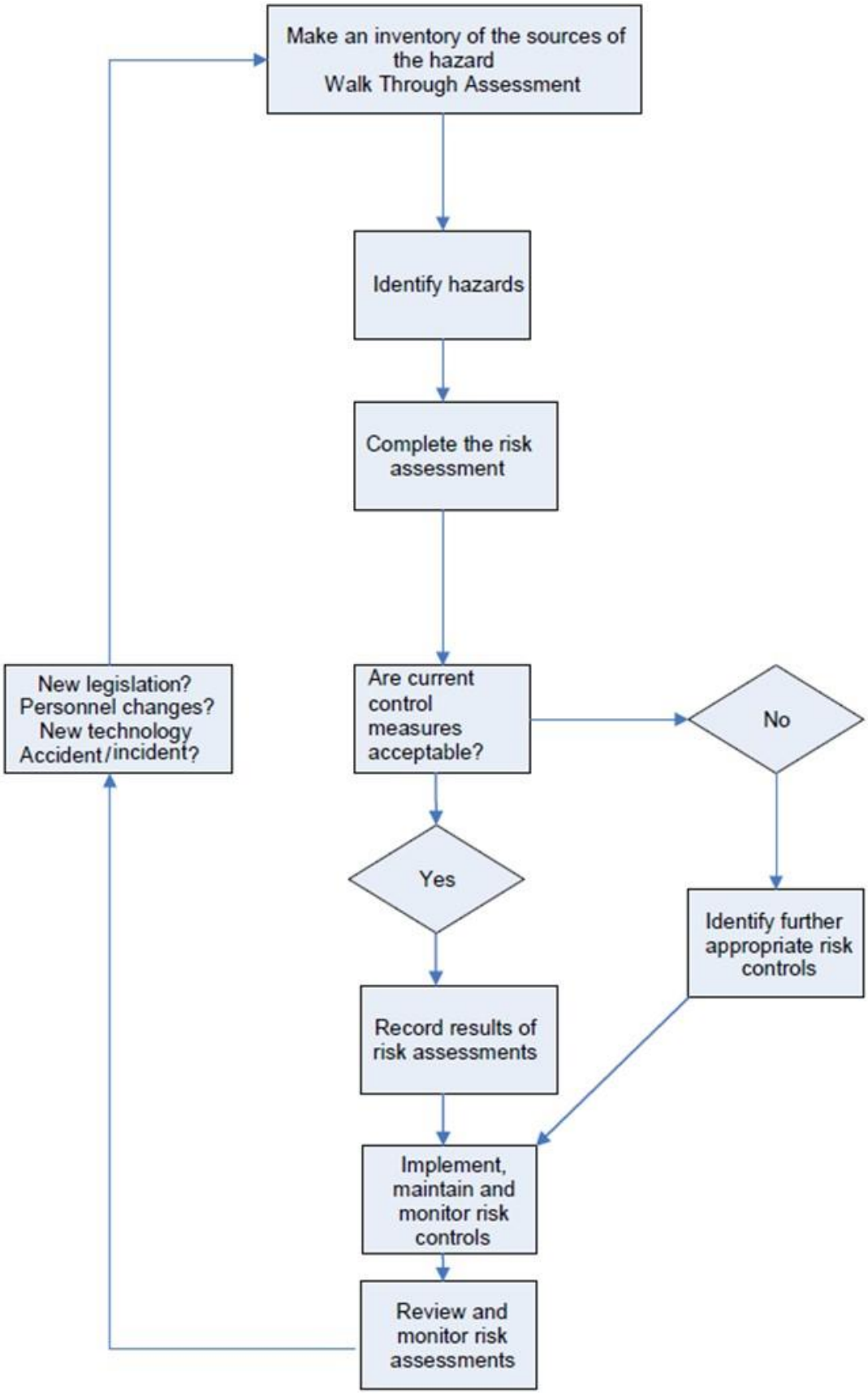
- Co-operate with the UTC Cambridge's efforts to implement well-being practices, attending briefings and raise their own awareness of the causes and effects of stress on health.
- Raise concerns with their line manager if they feel there are work issues that are causing them stress and having a negative impact on their well-being.
- Take responsibility for their own health and well-being by adopting healthy lifestyles.
- Take responsibility for their own development skills as one of the means to enable them to work effectively in their team and so reduce of the risk of stress.
- Take responsibility for working effectively in their assigned roles, thus helping to avoid causing stress to their colleagues.

2.21. Risk Assessment

Every employer is required under various regulations[1] to ensure a risk assessment has been performed before any hazardous activity takes place. This is not just restricted to laboratory activities (See section on COSHH, etc.). Risk assessments are a dynamic process designed to minimise risks as much as is practicably possible, the process for performing a risk assessment is given in Figure 1.

[1] Risk assessments are required by the *Control of Substances Hazardous to Health* (*COSHH) Regulations*), the *Management of Health & Safety at Work Regulations*, the *Dangerous Substances and Explosive Atmospheres Regulations (DSEAR)* and others.

Figure 1. Risk assessment process



Risk assessments should be performed on the UTC Cambridge Risk assessment form provided in Appendix 5. Risk assessments should be available for all staff to view and for inspection by Governors. Risk assessments should be reviewed on an annual basis.
Because it is impracticable for the UTC Cambridge to write risk assessments for each of the many activities in school science, UTC Cambridge follows the recommendation of the Health and Safety Commission to adopt published 'model' or 'general' risk assessments which school science departments adapt to their local circumstances.
The school has endorsed the use of the following publications as sources of model (general) risk assessments.

CLEAPSS[2] publications generally
CLEAPSS, *Hazcards*, current edition
CLEAPSS, *Laboratory Handbook*, current edition
CLEAPSS, *Recipe Cards,* current edition
CLEAPSS, L93, *Managing Ionising Radiations and Radioactive Substances*, (under revision, 2007)
ASE, *Safeguards in the School Laboratory*, ASE, 2006 (11th Edition), ISBN 978-0-86357-408-5

Whenever a new course is adopted or developed, all activities (including preparation and clearing-up work) are checked against the model risk assessments and significant findings are incorporated into texts in daily use, i.e., the scheme of work, set of lesson plans, technician notes.
If a model risk assessment for a particular operation involving hazards cannot be found in these texts (this will be of particular relevance to Challenge Projects), a specific risk assessment will need to be prepared, taking advice from CLEAPSS, or other advisory bodies where required. In order to assess the risks adequately, the following information is collected.

- Details of the proposed activity.
- The number, age and ability of the persons likely to do it.
- Details of the room to be used, i.e., size, availability of services and whether or not the ventilation rate is good or poor.
- Any substance(s) possibly hazardous to health.
- The quantities of substances hazardous to health likely to be used, including the concentrations of any solutions.
- Any other relevant details, e.g., high voltages, heavy masses, etc.

The development of new practical activities (including on open evenings, etc.) are encouraged but these should be undertaken only after a prior check against model risk assessments and/or a special risk assessments have been undertaken.
Where an activity must be restricted to those with special training, that restriction should be included in the risk assessment.

[2] Most CLEAPSS publications for secondary schools are available from the CLEAPSS website (www.cleapss.org.uk), login and password details are amended each year and available from the Lead Technician.

2.22. Violence and Aggression at Work

Violent or aggressive behaviour may be instigated by students, parents (family members) or members of the public. UTC Cambridge takes a no tolerance approach to aggressive behaviour (either verbal or physical) towards its staff or students and where this occurs the individual will be dealt with severely using the College's disciplinary policy and/or Police as required.

In the event of a student becoming aggressive staff should remain calm, should not confront the student, block their exit from a room or try to restrain them (unless there is an immediate risk of injury and they can do so safely). All incidents of aggressive behaviour should be recorded on SIMS and Heads of House and/or Director of Student Progress notified. The Colleges behaviour Policy will be followed.

Meetings with parents or members of the public should only be arranged for times and in places where other people are around. If a member of staff is concerned about meeting a particular person SLT should be notified and alternative arrangements made. If a parent/member of the public does become aggressive staff should remain calm but firm, and tell them that the meeting is over (if necessary tell them that they need to speak with a more senior member of staff and go and seek support). If necessary the Police will be contacted. All incidents should be reported to and recorded by the Business Manager.

2.23. Waste

Waste (including chemicals and equipment) is disposed of in an environmentally-responsible manner in accordance with relevant legislation. Chemical disposal follows guidance on CLEAPSS *Hazcards* (2013 edition or later). Where there is a risk, biological waste should be disposed of as clinical waste by incineration. All GMMs must be inactivated by an approved method prior to removal from the site. Sharps (including micropipette tips) should be disposed of in approved sharps containers.

2.24. Working at Height

Following risk assessments under the *Work at Height Regulations*, when it is impossible to avoid storage or display above head height, glass or other fragile items are never stored above head height and only light-weight and rarely-used items are stored there. When displaying items at high level or fetching or replacing items stored at high level, step ladders are used; staff never climb onto laboratory stools or benches.

2.25. Workplace Inspections

There will be an annual health and safety inspection involving both UTC Cambridge staff and outside advisors. This will be fed back to the Governors and Employee Voice Committee. Records will be kept for at least 5 years.

3. Laboratory

3.1 Introduction to laboratory safety

Due to the nature of the work performed at UTC Cambridge it is likely that all staff will at times be working in laboratories, it is therefore imperative that all staff are aware of laboratory specific safety rules. Science teaching has an excellent health & safety record and practical

work is at the core of the UTC Cambridge philosophy. UTC Cambridge is determined that spurious concerns about health and safety should not be allowed to inhibit good teaching and learning. However, it should be remembered that much of the work and equipment at UTC Cambridge is beyond that found in most school laboratories. If you are unsure or concerned about any piece of equipment or activity it is essential that you ask before starting the work.

1. At the beginning of each school year, teaching staff must make sure that their classes are aware of the student laboratory rules and issue copies if necessary. These can be found in Appendix 3.
2. Teaching staff must enforce the student laboratory rules, reminding students of them often enough for them to be familiar. With new students, time should be spent explaining the rules, with appropriate demonstrations if required.
3. Lesson preparation should be adequate and include checking on risk assessments and, where necessary, the health & safety precautions required. Requisitions must not be handed in at the last minute; technicians must be given adequate time to prepare work safely. Time should be allowed for consulting more-senior colleagues where there is any doubt and to try out experiments, particularly those involving significant hazard. A special risk assessment from CLEAPSS may be required. Teaching staff should explain precautions to students as part of their health & safety education, (using the CLEAPSS *Student Safety Sheets*, where appropriate). This is especially important at UTC Cambridge where there is considerable specialist equipment that is not normally available in a school environment – IF YOU ARE NOT SURE - ASK.
4. Open-ended investigations must be organised to allow the teacher to assess any risks and identify precautions before any practical work begins.
5. If, because of large class size or indiscipline, health and safety cannot be maintained during certain practical work, the work should be modified or abandoned. This decision should be reported to the Head of Department.
6. Teaching staff are responsible for the health and safety of any of his/her classes taken by a trainee teacher. If the normal class teacher is absent, another science teacher must be given this responsibility by the Head of Department/Head of Core Science/Head of Applied Science.
7. Teaching staff in charge of courses and Challenge Projects are responsible for ensuring that technicians are familiar with the appropriate precautions needed to control any hazards which might be encountered in preparing equipment for their lessons and in clearing the equipment away. Teaching staff may need to remind technicians of such warnings.

Security

Access to laboratories and preparation rooms will be controlled to comply with the *Management of Health & Safety at Work Regulations*. All lockable laboratories / preparation rooms / store rooms are to be kept locked at all times except when in use. It is the task othe staff member leaving such a room to see that the room is empty and that the door is locked.

Any non-science staff who have to supervise any class in a laboratory will receive brief training in laboratory rules (Appendix 3).

3.2. Animals, plants and microorganisms

Animals

UTC Cambridge does not hold an animal licence so the use of live animals is limited to invertebrates, however, animal carcases or parts maybe used for practical purposes.

Animal dander, faeces and urine can be allergenic. Before commencing with dissections it is important to check that members of the class (or staff) do not suffer from animal allergies. If a member of the class does develop itchiness or breathing problems they should be asked to stop, wash their hands and be moved to a well ventilated area, a first aider should be notified and records kept.

Invertebrate faeces can also be allergenic so where possible animal colonies should not be kept in college. If invertebrates are maintained for short periods of time care should be taken when cleaning them out to avoid creating a dust.

After handling any animal, hands should be thoroughly washed.

Plants

As with animals some people can develop allergic reactions, some plants (or parts of them) can also be poisonous. Before starting work it is important to ascertain if there are any particular risks associated with the plants involved (this is particularly relevant when performing field work). If someone develops a rash/redness (or other type of allergic reaction) they should thoroughly wash the area and first aid help should be sort.

Microorganisms

Only microorganisms deemed to be of negligible risk (to both humans and the environment) as determined by risk assessment maybe used at UTC Cambridge. Under no circumstances should any organisms on the *Advisory Committee on Dangerous Pathogens (ADCP) Approved List of Biological Agents* be used.

When growing microorganisms, care should be taken to avoid inadvertently growing human pathogens, i.e. where possible for routine class practicals plates should be incubated at or below 25°C unless a specific known organism is being grown. Plates should be sealed before incubation and fully labelled with the organism, date, and name of user. Unless required by the experiment plates should not be opened after incubation and never if contaminants are present.

All biological waste should be deactivated by autoclaving or treating with Virkon prior to disposal.

3.3. Biological Safety Cabinets

Biological safety cabinets at UTC Cambridge are provided only for the protection of samples and are not tested for user protection. Therefore, they should not be used when handling infectious material (including human samples).

3.4. Centrifuges and microfuges

Centrifuges and microfuges should only be used by people trained to use them safely. Centrifuges and microfuges should always be balanced before use, only be used with the correct types of tubes and should never be used with glass tubes. Lids must never be opened until the centrifuge or microfuge has completely stopped spinning (this is not possible on most). If there is a spill or breakage in a centrifuge or microfuge it must not be opened, the power should be turned off and it should be clearly labelled not to use. The Safety Officer or Lead Technician should be informed, after 30min it can be safely opened and the spill dealt with.

3.5. Fume Cupboards

COSHH Regulations require the regular testing of fume cupboards (maximum interval 14 months) with a quick check before use. Testing normally takes place each year in the summer term. The Lead Technician has the function of seeing that this happens and is trained to perform the tests. The records of the tests are available for staff reference and for inspection by the Governor's representative or an HSE Inspector in the *Health and Safety folder* on the Curriculum Drive.

All users should be trained to carry out a quick check that a fume cupboard is working before use.

No smoking of cigarettes is permitted at UTC Cambridge. However, demonstrations of a 'smoking machine' are permitted in fume cupboards in designated laboratories. South and Main Challenge Laboratories and Chemistry are fitted with efficient fume cupboards.

3.6. Genetic modification

The Challenge Labs at UTC Cambridge are registered with the HSE for work with Class 1 genetically modified micro-organisms (GMMs). The Biological Safety Officer (BSO) is responsible for overseeing all work involving GMMS and will provide suitable training. Any work requiring the creation or use of GMMs must be formally risk assessed in advance of commencement and must be notified to SLT Meeting and given approval before commencement. A list of people that have worked on each project will be kept by the (BSO). Further advice can be obtained from Dr Keff Tibbles, Safety Officer to the Clinical School, Cambridge University.

3.6. Human tissue and DNA.

Use of primary human tissue (including blood)

With the exception of human cheek cells obtained by buccal swab, primary human tissue (including blood) should only be used at UTC Cambridge if it has been fixed and possession of it complies with the *Human Tissue Act*. Under no circumstances should primary human DNA be analysed.

Human cheek cells obtained by a buccal swab may be used for slide preparation or for DNA extraction as the quantities of tissue involved are small and the risk is minimal, however, an appropriate risk assessment should be performed and no analysis performed on the DNA obtained.

Use of secondary human tissue

Where a human cell line has been deemed safe by long term historical use or by testing it maybe grown and handled at UTC Cambridge as long as this does not contravene the human tissue act.

3.8. Ionising Radiations and Radioactive substances

UTC Cambridge follows the guidance in CLEAPSS Guide L93 *Managing Ionising Radiations and Radioactive Sources,* 2013 edition.

The Standard Operating Procedures for the use of ionising radiations have been adapted from the CLEAPSS model. It is a function of the Teacher in Charge to see that they are adhered to. Staff using ionising radiations have been issued with their own copies, as a part of their training, and a reference set is filed centrally with this policy in the prep room 121.
The *Radioactive Sources History* (i.e., authority to purchase, record of delivery, details of events in the life of the source and eventual certificate showing method of disposal) are kept in prep room 121 with a copy kept by the Business Manager.
The *Use Log* (showing the times that any sources are removed from and returned to their store) is kept with the radioactive store in prep room 121.
The *Monitoring Record* of tests for leakage of radioactive sources and contamination by radium sources is kept in the *Safety Check File*. Testing normally takes place each year in the summer term.
It is the function of the RPS to ensure these records are all kept up to date.

3.9. Pressure vessels

Autoclaves, pressure cookers and model steam engines need periodic inspection under the *Pressure Systems Safety Regulations*. Inspection normally takes place each year in the autumn term records of examinations are kept in the *Safety Check File* and by the Business Manager. You need to be trained how to use these items safely before commencement of any work. No attempt should be made to carry out maintenance on these items yourself.

4. Off site

4.1. Driving for Work

Driving for work could involve driving yourself, driving yourself and other members of staff or driving students. This could involve the use of a private car, rented car or the school minibus.

All staff who drive as part of their work must provide a copy of their driving licence, DVLA Driving Licence Check (https://www.gov.uk/check-driving-information) and car insurance to the Business Manager, on an annual basis the DVLA and insurance checks need to be repeated. It is the employee's responsibility to notify the Business Manager if there are any changes to their ability to drive in the interim. It is also the employee's responsibility to ensure that a private car is in road worthy condition.
Students should never be asked to drive other students or staff.

For those driving the school minibus they need to complete the DVLA Licence check and provide a copy of their driving license check number, they also have to undergo a minibus induction using the checklist in Appendix 4, this should be completed on an annual basis and a record is appended to personnel files by the Business Manager.
Under no circumstances should anyone drive if they are under the influence of drink, drugs or medication that could impair judgement. Journeys should be planned in advance and suitable rest breaks included (15min every 2hours). The weather should be checked in advance of trips and monitored throughout, if the weather makes travel dangerous trips should be cancelled, postponed or curtailed. At all times the Colleges *Management of educational visits and learning outside the classroom Policy* should be adhered to.
In the event of a breakdown staff and students should normally be moved to a safe location well away from the vehicle and side of the road, only in exceptional circumstances or in safe locations (such as a well-lit residential street) should they remain with the vehicle.
The minibus is maintained by the Business Manager with regular servicing and MOTs as per the manufacturer's guidance.

4.2. Educational Trips and Visits

UTC Cambridge has separate policy on the *Management of educational visits and learning outside the classroom*, please refer to this.

5. If things go wrong

5.1. Reporting and Investigation of accidents and near misses/incidents

Any accidents/incidents that results in/or could have resulted in injury should be recorded in the accident book (kept at reception). More serious injuries involving hospital treatment (not just precautionary), time off work, serious injury (including that caused by violence), or occupational illness may require reporting under RIDDOR, please check with the Business Manager if you have any concerns.

5.2. Crisis Management and Business Continuity

UTC Cambridge has separate Crisis Management and Business Continuity plan, please refer to this.

Appendix 1 - Staff roles and Emergency contacts

Staff roles

Staff roles and/or emergency contacts updated on: April 2015.	
Advice on health & safety and all aspects of practical science generally	CLEAPSS 01895 251496 Email: science@cleapss.org.uk
Head of Safety, UTC Cambridge	Alistair Easterfield
Overseeing health and safety in the Science Department	Alistair Easterfield
Science Department health & safety officer	Alistair Easterfield
Lead Lab Technician	Shiree Gilday-Burns
Various training functions	Germaine Verney
Subject specialist for consultation over health & safety matters in biology	Alistair Easterfield/Alex Caley
Subject specialist for consultation over health & safety matters in chemistry	Danielle Pacey
Subject specialist for consultation over health & safety matters in physics	Colin Bashford
Overseeing the checking of activities against the model risk assessments and recording significant findings	Shiree Gilday-Burns
The teacher in charge of radioactive sources (Radiation Protection Supervisor, RPS)	Colin Bashford
UTC Cambridge Radiation Protection Adviser, RPA	
The local authority's Radiation Protection Officer, RPO	
UTC Cambridge Biological Safety Officer (responsible for Genetic Modification)	Alistair Easterfield
Safety Officer, Clinical School, Cambridge University	Keff Tibbles 01223 767124 Email: kt10001@medschl.cam.uk
UTC Cambridge person in charge of chemical storage and disposal	Shiree Gilday-Burns
UTC Cambridge person in charge of manual handling	Lizzie Andrews
UTC Cambridge external visits coordinator	Collin Bashford

Emergency contacts

EMERGENCY ADVICE	CLEAPSS 01895 251496
Serious accident: Ambulance service	9-999
Serious accident: School first-aiders	724300
Serious accident: UTC Cambridge Health & Safety Officer	Alistair Easterfield
Serious accident: UTC Cambridge Governor responsible for health & safety officer	Professor Nigel Slater
Major chemical spill: Fire & Rescue Service Chemical Incident Unit	999
Gas leak: Transco	0800 111999

Appendix 2 – Public Heath England advice on communicable diseases

Rashes and skin infections

Children with rashes should be considered infectious and assessed by their doctor.

Infection or complaint	Recommended period to be kept away from school, nursery or childminders	Comments
Athlete's foot	None	Athlete's foot is not a serious condition. Treatment is recommended
Chickenpox	Until all vesicles have crusted over	*See: Vulnerable Children and Female Staff – Pregnancy*
Cold sores, (Herpes simplex)	None	Avoid kissing and contact with the sores. Cold sores are generally mild and self-limiting
German measles (rubella)*	Four days from onset of rash (as per "Green Book")	Preventable by immunisation (MMR x2 doses). *See: Female Staff – Pregnancy*
Hand, foot and mouth	None	Contact your local HPT if a large number of children are affected. Exclusion may be considered in some circumstances
Impetigo	Until lesions are crusted and healed, or 48 hours after starting antibiotic treatment	Antibiotic treatment speeds healing and reduces the infectious period
Measles*	Four days from onset of rash	Preventable by vaccination (MMR x2). *See: Vulnerable Children and Female Staff – Pregnancy*
Molluscum contagiosum	None	A self-limiting condition
Ringworm	Exclusion not usually required	Treatment is required
Roseola (infantum)	None	None
Scabies	Child can return after first treatment	Household and close contacts require treatment

Scarlet fever*	Child can return 24 hours after starting appropriate antibiotic treatment	Antibiotic treatment is recommended for the affected child
Slapped cheek/fifth disease. Parvovirus B19	None (once rash has developed)	See: Vulnerable Children and Female Staff – Pregnancy
Shingles	Exclude only if rash is weeping and cannot be covered	Can cause chickenpox in those who are not immune, ie have not had chickenpox. It is spread by very close contact and touch. If further information is required, contact your local PHE centre. See: Vulnerable Children and Female Staff – Pregnancy
Warts and verrucae	None	Verrucae should be covered in swimming pools, gymnasiums and changing rooms

Diarrhoea and vomiting illnesses

Infection or complaint	**Recommended period to be kept away from school, nursery or childminders**	**Comments**
Diarrhoea and/or vomiting	48 hours from last episode of Diarrhoea or vomiting	
E. coli O157 VTEC Typhoid* [and paratyphoid*] (enteric fever) Shigella (dysentery)	Should be excluded for 48 hours from the last episode of diarrhoea. Further exclusion may be required for some children until they are no longer excreting	Further exclusion is required for children aged five years or younger and those who have difficulty in adhering to hygiene practices. Children in these categories should be excluded until there is evidence of microbiological clearance. This guidance may also apply to some contacts who may also require microbiological clearance. Please consult your local PHE centre for further advice
Cryptosporidiosis	Exclude for 48 hours from the last episode of diarrhoea	Exclusion from swimming is advisable for two weeks after the diarrhoea has settled

Respiratory infections

Infection or complaint	Recommended period to be kept away from school, nursery or childminders	Comments
Flu (influenza)	Until recovered	*See: Vulnerable Children*
Tuberculosis*	Always consult your local PHE centre	Requires prolonged close contact for spread
Whooping cough* (pertussis)	Five days from starting antibiotic treatment, or 21 days from onset of illness if no antibiotic treatment	Preventable by vaccination. After treatment, non-infectious coughing may continue for many weeks. Your local PHE centre will organise any contact tracing necessary

Other infections

Infection or complaint	Recommended period to be kept away from school, nursery or child minders	Comments
Conjunctivitis	None	If an outbreak/cluster occurs, consult your local PHE centre
Diphtheria *	Exclusion is essential. Always consult with your local HPT	Family contacts must be excluded until cleared to return by your local PHE centre. Preventable by vaccination. Your local PHE centre will organise any contact tracing necessary
Glandular fever		
Head lice	None	Treatment is recommended only in cases where live lice have been seen
Hepatitis A*	Exclude until seven days after onset of jaundice (or seven days after symptom onset if no jaundice)	In an outbreak of hepatitis A, your local PHE centre will advise on control measures
Hepatitis B*, C*, HIV/AIDS	None	Hepatitis B and C and HIV are bloodborne viruses that are not infectious through casual contact. For cleaning of body fluid spills see: Good Hygiene Practice
Meningococcal meningitis*/ septicaemia*	Until recovered	Meningitis C is preventable by vaccination There is no reason to exclude siblings or other close contacts of a case. In case of an outbreak, it may be necessary to provide antibiotics with or without meningococcal vaccination to close school contacts. Your local PHE centre will advise on any action is needed
Meningitis* due to other bacteria	Until recovered	Hib and pneumococcal meningitis are preventable by vaccination. There is no reason to exclude siblings or other

		close contacts of a case. Your local PHE centre will give advice on any action needed
Meningitis viral*	None	Milder illness. There is no reason to exclude siblings and other close contacts of a case. Contact tracing is not required
MRSA	None	Good hygiene, in particular handwashing and environmental cleaning, are important to minimise any danger of spread. If further information is required, contact your local PHE centre
Mumps*	Exclude child for five days after onset of swelling	Preventable by vaccination (MMR x2 doses)
Threadworms	None	Treatment is recommended for the child and household contacts
Tonsillitis	None	There are many causes, but most cases are

* denotes a notifiable disease. It is a statutory requirement that doctors report a notifiable disease to the proper officer of the local authority (usually a consultant in communicable disease control). In addition, organisations may be required via locally agreed arrangements to inform their local PHE centre. Regulating bodies (for example, Office for Standards in Education (OFSTED)/Commission for Social Care Inspection (CSCI)) may wish to be informed – please refer to local policy.

Outbreaks: if an outbreak of infectious disease is suspected, please contact your local PHE centre.

Appendix 3 – Laboratory rules

The biggest danger in the lab is ***YOU***! You are at risk when you don't understand the hazards or you are careless, or both. The person most likely to suffer from your mistakes is ***YOU***! Report any accident or breakage to a member of staff.

1. Never rush about or throw things in the lab. Keep your bench and floor area clear, with bags and coats left in lockers, and stools tucked away.
2. Follow instructions precisely; check bottle labels carefully and keep tops on bottles except when pouring liquids from them; only touch or use equipment and materials when told to do so by a teacher; never remove anything from the lab without permission.
3. Wear eye protection and lab coats when told to do so and keep it on from the very start until all practical work is finished and cleared away.
4. When using naked flames (e.g., Bunsen or spirit burners or candles), make sure that ties, hair, baggy clothing etc. are tied back or tucked away. Never wear gloves when working with naked flames.
5. Always stand up when working with hazardous substances or when heating things so you can quickly move out of the way if you need to.
6. Never taste anything or put anything in your mouth in the laboratory. If you get something in your mouth, spit it out at once and wash your mouth out with lots of water. Tell a member of staff.
7. Always wash your hands carefully after handling chemicals, microbes or animal and plant material or wearing gloves.
8. If you are burnt or a chemical splashes on your skin, wash the affected part at once with lots of water. Tell a member of staff.
9. Never put waste solids in the sink. Put them in the bin unless your teacher instructs you otherwise.
10. Wipe up all small spills and report bigger ones to your teacher.
11. Any broken glass or sharps should be reported immediately to a member of staff. Do not try and pick them up.
12. Never interfere with apparatus or experiments that you are unsure of or not working on.

Appendix 4 – Minibus training checklist

Name of driver: ……..

Ascertain that the driver has suitable experience driving experience to safely drive the minibus

Has a valid driving license ☐ Driving License No: ……..

DVLA License check	☐
Has been shown how to carry out routine safety checks (lights, tyres, wheel fixings)	☐
Knows how to report faults	☐
Knows how to correctly adjust safety equipment (seat belts' adjustable seats (front and back) and headrests)	☐
Knows how to perform pre-trip checks	☐
Knows what to do if the vehicle breaks down	☐
Knows that they must never drive under the influence of drink or drugs	☐
Knows that they should never use a mobile phone when driving (even hands free can seriously affect concentration)	☐
Must notify the Business Manager and not drive if they are taking any medication that may impair judgement	☐
Are aware of the dangers of tiredness and what to do if they feel sleepy	☐
Knows they need to consider weather conditions before setting out on a trip and if necessary adapt or cancel the trip if it is unsafe	☐
Has completed familiarisation drive	☐

Assessed by: …… Signature: …… Date: ……..

Signature of driver: …… Date: ……

Appendix 5 – Risk assessment

Risk assessment for: …….. Date of Risk assessment: ……. Risk assessment performed by: …….

Signature: ……...

What are the hazards?	Who is at risk?	How might they be harmed?	What needs to be done to reduce the risk?

Review date:	Reviewed by:	Signed:

Appendix 6 – Personal Emergency Evacuation Plan

PERSONAL EMERGENCY EVACUATION PLAN (PEEP)

Name:	
Reason for PEEP:	
Areas of the building covered by this plan:	

ALARM SYSTEM:		
I am informed of an emergency by: (tick all that apply)		
Existing Alarm System		Any other notes or comments:
Visual Alarm System		
Pager Device		
My carer or buddy		
Other: Please specify		

DESIGNATED ASSISTANCE:			
The following people have been designated to give assistance when I need to get out of a building:			
Name(s)	**Contact Phone Number**		
1.			
2.			
We have decided on a pre arranged meeting points for all locations:		**YES**	**NO**

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Pre arranged meeting point:
EQIPMENT PROVIDED:
I need to use the following equipment: (please tick all that apply)

ResQmat		Any other notes or comments:
Mechanical Hoist		Training needed? Y/N
Vibrating Pager (Deaf Alerter System)		
Other: Please specify below		
None required		

I need the equipment as listed above to be available in the following places:

CONFIRMATION OF USE OF EQUIPMENT :	YES	NO
The use of the equipment I need has been explained to me		
I would like further training on the use of evacuation equipment		

EVACUATION PROCEDURE:	
These are step by step instructions beginning from the sound of the first alarm:	
1.	
2.	
3.	
4.	
5.	
6.	

AWARENESS OF PROCEDURE:		
I have received a copy of information about the emergency evacuation procedures in:		
In Braille		Any other notes or comments:
In British Sign Language		
In print		
In large print		
On Disk		
Other – see opposite		

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CONFIRMATION OF RECIEPT AND USE OF PEEP:	
I understand that I am responsible for keeping my PEEP as accurate as possible and drawing attention to changes in circumstance that should prompt a review. The data provided by you on this form will only be available to UTC Cambridge staff, who may need to use it for the purpose of ensuring your health and safety whilst you are at the College. It may also be shared with the emergency services if necessary. It will be stored in accordance to the Data Protection Policy. I understand the above notice and give my consent to my data being shared as detailed above My line manager or contact for this is:	
Signature of Staff/Student/Visitor :	Signature of line manager / Academic Advisor
Date:	Date: