University of Sussex
Mathematical & Physical Sciences

School of Mathematical and Physical Sciences

Safety Handbook for staff and students

EMERGENCIES - AT ALL TIMES CALL INTERNAL 3333

Health and Safety Contacts

Head of School – Professor Peter Coles p.coles@sussex.ac.uk
School Health and Safety Co-ordinators:
School Administrator – Mrs Oonagh Caunter o.m.caunter@sussex.ac.uk
Lead for Laboratory Health and Safety - Dr Jose Verdu Galiana @sussex.ac.uk
Chief Technician – Mr Richard White r.f.white@sussex.ac.uk

Contents

Appendix 1
Safety procedures and guidance documents

Appendix 2
List of University of Sussex Safety Policies.

Section 1 - Introduction

This booklet is intended to help you work safely and avoid accidents while you are working or studying in the School of Mathematical and Physical Sciences. It should be read in conjunction with the University Health and Safety Policy which sets out roles and responsibilities for staff and students and other relevant policies, procedures and guidance documents. The prevention of accidents both to you and others must be the aim at all times. The effects of accidents may be disastrous not only to you but also to your colleagues. It is therefore important that you read the advice given here at the start of your work or study at the university. Accident prevention is mainly common sense, tidiness and forethought, but safety in the workplace and the laboratory does require constant vigilance and care. Always seek expert advice when in doubt about the safety of a practice.

School Health & Safety Policy

1. Aims

The University's Commitment and Statement of General Policy states::
'The University is committed to best practice in health and safety performance and to meeting its responsibilities for the health, safety and wellbeing of its staff and students and others, including visitors, who may be affected by University activities. This can only be achieved through the application of good practice in health and safety and positive actions by its managers and staff.'

The School of Mathematical and Physical Sciences endorses this aim and further aims to ensure that all staff receives sufficient information, instruction, training and supervision in order:

- to comply with relevant safety legislation
- to respond to emergency situations
- to report accidents and assist in investigation.

We also wish to ensure that all staff know how to respond to emergency situations e.g. fire alarms or accidents, and that any accident on the premises is reported and investigated. The School of Mathematical and Physical Sciences aims to develop and maintain at a high level a general culture of safety awareness in liaison with other Schools and building users.

2. Safety Management

The **Head of School** is responsible for safety in the School and has designated the following staff to undertake the operation:

Health and Safety Co-ordinators:

- **School Administrator** (Oonagh Caunter) is responsible for day-to-day administration of safety.
- **Chief Technician** (Richard White) is responsible for technical safety and inspections.
- **Laboratory Safety Co-ordinator** (Jose Verdu Galiana) is responsible for Physics & Astronomy research and teaching laboratory student safety.

Their brief is to inform all staff of relevant legislation, carry out safety inspections, risk assessments of the workplace and, from these, identify any necessary training needs and/or preventative/protective measures and implement them. Matters involving outside agencies, e.g. the Health and Safety Executive, will be brought to the attention of the School through the School Administrator. The Head of School is supported and kept advised of developments by the University's Health, Safety and Wellbeing Office.

First Aid

First Aiders receive training through the University's Health and Safety Office. The Security Office holds the responsibility for contacting First Aiders. There are first aid boxes within the School in the foyer of Pevensey 2. There is also an emergency telephone available to dial x 3333 in the foyer of Pevensey 2.

Fire Precautions
There is a procedure for ensuring safe and speedy evacuation in the event of the fire alarm sounding. Details are in the School's Health & Safety Guidance notes. It is the responsibility of the School to ensure fire wardens are available in every area of the School's facilities.

Safety Information
The School Administrator will keep all relevant safety information, the School's Health & Safety Guidance notes and risk assessment forms. They will also provide information on the Safety Notice board which is located by office 3A3 Pevensey 2. All new staff are made aware of the University Health and Safety Policy and the Staff Health, Safety and Environmental Handbook and where to access them on appointment by the Human Resources Office. Additional copies of the School Safety Policy and the Health & Safety Guidance notes are available on the School website, provided by the School Administrator.

Employees' and students' Responsibility
All employees and students of the University, whilst engaged in an University activity within all University premises and whilst engaged in any work or study related activity outside the University campus, must take all reasonable steps to ensure their own safety and that of others who may be affected by the things they do, or fail to do. Staff and students have a duty to co-operate with line managers or supervisors in matters of health and safety.

Accidents
All accidents or 'near-misses' must be reported to the Health and Safety leads to be reported by using the University's on-line accident report form.

Smoking
In line with University policy, smoking is prohibited in all areas of the School, including offices, and from a distance of two metres of any building.

Out of Hours working
Persons wishing to gain access to the building outside normal working hours must follow the University's Lone Working Policy where applicable. This is to ensure their own safety in the event of an emergency.

Display Screen Equipment
All users have access to the University's 'Display Screen Equipment Policy' and the HSE booklet 'Working with VDUs' on the School website. A Display Screen Equipment risk assessment is required for all members of staff.

Electricity at Work
All portable electrical equipment owned by the School will be subject to regular testing for electrical safety (the PAT); testing is coordinated by the School Administrator. Any personal items of electrical equipment such as kettles are subject to the same testing requirements and may be removed if not showing a current test sticker.

Manual Handling
Supervisors or the School Administrator should make risk assessments for tasks involving the movement of heavy items, e.g. stationery, furniture, etc. Staff of the School should not move heavy items, but ask a premises assistant who has been trained in manual handling to do so.

Risk Assessment
Risk assessments undertaken on the work activities of staff and students are recorded and made available to those affected by the activity. They will be reviewed regularly and further risk assessments will be carried out if new work practices are introduced.
Mechanisms which are put in place to ensure safety policies and procedures are carried out will be audited and monitored by the Safety Inspection Team.

Committee
The School Health, Safety and Environment Committee will meet twice a year to consider safety matters arising within the school and receive reports from safety leads on building inspections, accidents and incidents, safety audits and changes in legislation or University policies.

Peter Coles
Head of School
February 2013

Section 2 - General information

1. Working hours and access to buildings.

The buildings are officially open from 08:30 - 18.30 Monday to Friday inclusive. At all other times access is restricted and various conditions for entry and working during closure hours must be adhered to in agreement with the University of Sussex Health and Safety Office Guidance on Lone and Out-of-Hours Working (November 2010).

Visitors shall report to the School Office or be met at the entrance to the premises by the person they are visiting and should not be allowed general access to the buildings unaccompanied.
No child under the age of 16 years shall be permitted to enter any Science building other than the main entrance/reception area or any other nonhazardous area designated by the Head of School. Children under the age of 16 must always be accompanied by an adult. In no circumstances should they be allowed in laboratory areas without prior authorisation from the relevant Head of Department and School Safety Adviser.

Note: This regulation shall not apply in the case of authorized parties of visitors or where a child is taking part in research work approved by the Head of Department.

1.2 Out of Hours Running of Unattended Experiments

Experimental apparatus or equipment should not be left running unattended out of hours unless absolutely necessary, in which case a risk assessment shall be carried out and a permit providing emergency contact details, etc. completed and prominently displayed in an appropriate location. Both must be authorised by the Supervisor responsible for the work. See the School Rules for Out of Hours Running of Unattended Experimental Apparatus (page ?).

1.3 Reporting of Accidents and Incidents

All accidents regardless of the extent of injury, or any incident where someone could have been injured, must be reported to a School Health and Safety Co-ordinator who will complete of an online accident/incident report form.
Accidents involving ionising radiation must be reported immediately to the University Radiation Protection Officer.

Section 3 – Emergency Procedures

In an emergency there will be no time to find out what you have to do. Therefore you should familiarise yourself with the emergency procedures.
You must know:-

- The layout of your Buildings.
- The location of fire escapes (especially for outside normal hours)
- The sound of your nearest fire alarm and how and where it is set off
- The position of nearest telephone which gives access to call the emergency line 3333
- Where and how to obtain First Aid
- Any special local precautions
- Who to contact to report accidents and significant near misses.

3.1 Gas- significant Leaks

- Dial 3333 on the internal telephone from another room.
- Extinguish naked flames, switch off sparking motors, post warning notices and keep people out of the area. Do not operate any other switches.

3.2 Action on hearing the fire alarm

- Leave your room or area.
- Do not stop to collect your belongings
- Go to your assembly area which will be away from the building entrance. Do not use the lift .

3.3 Actions on discovering a Fire

- Operate fire alarm.
- Check for persons at risk - (if no personal risk is involved).
- Only attempt to fight a fire if you have been trained to do so.
- Leave the building by the nearest available exit. Do not use the lift.
- Go to the building control point (usually at the entrance to the building) to advise the Fire Marshal, Security Officer or Fire Service of the location of the Fire.

3.4 Fire Extinguishers

Those extinguishers which have been used for fire fighting must be replaced immediately, inform the School Health and Safety Co-ordinators or the Premises Supervisor on 7133.

Remember that different classes of fire require the use of different extinguishing media:

- CO2 - General use on small fires, particularly for electrical and small flammable liquid fires;
- Foam – Multi-purpose, particularly for solvents, flammable liquids;
- Dry Powder - Fires involving metals e.g. Na, K, organo metallics, etc. and electrical fires;
- Other types of extinguishing media are obtainable for specific purposes. Seek advice if you have a particular fire risk, e.g. some laboratories have special dry powder extinguishers for metal fires.
- Fire Blankets - these should only be used to put out very isolated small fires and for smothering burning clothes.

3.5 Fire Wardens

Fire wardens have been allocated the responsibility of evacuating specific areas and will ensure their area is cleared before reporting to the control point. Your co-operation is essential, those failing to do so will be reported to the relevant line manager.
After the alarm has been sounded Security Officers will investigate and take all necessary action in the event of a fire until the arrival of the Fire and Rescue Service. On arrival, the Senior Fire Officer present on the appliance will assume responsibility for dealing with the fire, but members of Faculty, Senior Technical Staff, and the person or persons responsible for the area in which the fire started must stay available to give advice to the Fire Brigade.

3.6 Fire Drills

Fire drills are held in all University buildings during the academic year. Any faults discovered during these drills, such as exit doors or fire alarms not operating correctly or problems with escape routes should be reported immediately to the School Health and Safety Co-ordinators.

3.7 Control and assembly points

The control and assembly points are listed on the safety office web pages and posted on School Safety notice boards. There are two relevant assembly points – Assembly point 8 by the zebra crossing outside Pevensey 1, or Assembly point 14 at the top of the steps to the rear of Pevensey 3, in the Science Carpark. The main aim is to get well clear of the building and assemble until the all-clear is given by the Fire Marshal.

3.8 First aid procedures

For most incidents the normal procedure to be followed is:-
a. For minor injuries – – Staff and students should ensure they are aware of the nearest location of first aid supplies. Even minor scratches should be washed thoroughly in cold running water before applying a plaster.

b. If the injury appears to be of a more serious nature, dial internal 3333 to summon mobile first aid assistance.
c. If it is obvious that an ambulance will be required, follow procedure b) and request an ambulance, stating number of casualties and precise location.

Section 4 - General Laboratory precautions

There are many risks involved with laboratory work. These are detailed on the following pages along with the precautions to be taken.

4.1 Laboratory housekeeping

a. Keep the laboratory and benches tidy. Store apparatus no longer required and ensure that waste material is removed as soon as possible.
b. Keep all corridors and passages clear. In particular, access to fire escapes and to fire extinguishers must on no account be impeded.
c. Keep fire doors closed as indicated by the signs.
d. Always be careful when opening laboratory doors. Except in dire emergency no one should ever run in a laboratory building.
e. Eating in laboratories is prohibited.
f. Make sure all containers are clearly labelled. Never take chances with an un-labelled container. Before handling chemicals/substances refer to the COSHH hazard assessments for the lab/workshop which must be produced by the lab/workshop supervisor.
g. All gas cylinders should be either in a stand or chained to ensure that they are safe. Fuel gases and oxidising gases must always be stored separately even empty cylinders. Cylinders surplus to requirement and empty cylinders must not be stored in the laboratory, but moved to the separate store area.
h. Quantities of highly flammable liquids should be kept to a minimum and not exceed 50l in any one laboratory and must be stored in a spill tray within a labelled, approved flammables cupboard.
i. Radios and personal stereos are not allowed in laboratories as they may prevent the users from hearing alarms or calls for assistance.
k. Experimental work may only be carried out by undergraduates when a demonstrator or Faculty member is present.

4.2 Eye protection

SAFETY GLASSES MUST BE WORN AT ALL TIMES IN LABORATORIES AND WORKSHOPS WHERE THE BLUE MANDATORY NOTICE IS SHOWN ON THE DOOR. These areas are designated as Permanent Eye Protection Areas (PEPAs).

In areas which are not designated as PEPAs, appropriate eye protection should be worn as and when required by good laboratory practice as outlined by the risk assessment for the activity being undertaken. Within a PEPA the type of eye protection worn must also be consistent with good practice as outlined by the activity risk assessment. Full eye protection, face shields and goggles, must be used when the process engaged in involves significant risk of splashing of corrosive materials, flying fragments etc. The minimum level of protection permissible for any type of experimental work within a PEPA is wearing of safety spectacles conforming to BS2092.2. Ordinary sight-correcting spectacles afford basic protection against minor splashes etc. and represent the minimum level of protection for personnel passing through a low risk section of a PEPA, but not working there.

If prescription glasses are necessary these should be made in safety glass, or further protection worn as well, such as Pulsafe Armamax over spectacles. Safety prescription glasses should be inspected annually by a qualified optician.

These safety rules will be strictly enforced. Failure to comply will lead to exclusion from the laboratories.

4.3 Apparatus and services

a. Do not use apparatus without first reading instructions and then only if you understand its operation.
b. Before using any apparatus or equipment refer to the safe working practices document for that lab/workshop and the risk assessment for research equipment which must be produced by the lab/workshop supervisor.
c. Do not interfere with safety guards or electrical interlocks on apparatus.
d. Do not overload electrical supplies and ensure that appropriate fuses are fitted.
e. Use appropriate protective clothing (safety glasses, gloves, lab coats, etc.) where this is recommended.
f. Do not obstruct service controls, such as distribution boards, mains isolators, fire hoses and fuse gear.
g. Where possible avoid the use of trailing cables and in particular do not use portable fires or heaters in the laboratory. Radiant fires are prohibited in all University buildings.
h. It is forbidden to work alone with hazardous materials or machinery.

4.4 Glassware

Many accidents occur in the handling of laboratory glassware therefore all work must follow the University of Sussex Safety Procedures and Guidance Safe Working with Laboratory Glassware.

4.5 Footwear

Footwear providing adequate protection MUST be worn in the Laboratories and workshops at all times. (i.e. sandals or bare feet are not acceptable).

4.6 Medical considerations

a. Medical Disorders. It is advisable that people with known disorders, which may need special attention, should inform their supervisor and make sure that companions or colleagues know what to do.
b. Contact Lenses. It is advised that contact lenses are not used when working with chemicals.
c . Pregnancy. Refer to Safety Information on the Safety Office web pages for New and Expectant Mothers at Work, Guidance on Compliance with the Management of Health and Safety at Work (Amendment) Regulations. Pregnant women should consult the School Radiation Protection Advisor before working in radiation laboratories.

4.7 Aerosols/spray canisters

These can be highly dangerous if wrongly handled. Never keep aerosols or spray canisters in direct sunlight or near any source of heat. Always use in well-ventilated areas. Many aerosols have a highly flammable propellant - never use them near a source of ignition.

4.8 Refrigerators

All refrigerators should be labelled as to its use; chemicals and food should not be mixed. No highly flammable or flammable solvents should be stored in refrigerators unless they are certified sparkproof. Refrigerators used for the storage of radioactive materials should be clearly labelled with the correct hazard sign and MUST be secured when not in use.

4.9 Precautions with Chemicals

COSHH (Control of Substances Hazardous to Health): All chemical and biological work undertaken in research and teaching must be subjected to a hazard and risk assessment (COSHH assessment). This is a legal requirement within the framework of the Control of Substances Hazardous to Health Regulations 2002 (as amended). Control of Substances Hazardous to Health Regulations.

4.10 Toxicity of Chemicals

a. Very few chemicals are completely harmless. They may cause damage if inhaled, ingested, enter through cuts or are absorbed through the intact skin.
b. To minimise inhalation fume cupboards should always be used for procedures in which toxic or harmful vapours, dusts or gases may be emitted.
c. Protection against contamination and ingestion depends mainly on good housekeeping. A safe system of work must be used to minimise risk.

4.11 Handling of Chemicals

a. Try to use small quantities where danger may exist, especially if there is a risk of explosion.
b. Pipetting by mouth is forbidden. Alternative methods for filling pipettes and burettes must always be used. This applies to all liquids.
c. Safety glasses/face shield and appropriate skin protection (e.g. gloves and coat) must be worn when handling any chemicals. If ANY chemical (especially an acid or alkali) enters the eye this should be washed at once with a copious supply of sterile saline or tap water.
d. Care must always be taken in opening all bottles and drums. This is especially the case with un-labelled items. All unidentified chemicals must be treated as dangerous and suitable protective equipment must be used in handling such material.
e. Always wash your hands after handling chemicals.
f. Refer to the laboratories hazard and risk assessment, this will include an assessment of the chemical toxicity to comply with the COSHH regulations and safe working practices before staring any work. This hazard and risk assessment should be produced by the Laboratory Supervisor or by individual researchers or technicians and approved by their supervisor. Ask to see it.

4.12 Spillage of Chemicals

See Emergency Spills procedure.

4.13 Disposal of Chemicals

See Disposal of waste chemicals.

4.14 Electricity

See Electricity at Work Regulations.

4.15 Electrical hazards

The risks associated with electrical supplies and equipment, including batteries and condensers, can cause injury and even death as well as starting fires and explosions.

a. Electrical Burns - Immerse in cold water for 10 minutes then send casualty to the Health Centre.
b. Shock – Electric shock is the effect produced on the body, particularly its nervous system, by an electric current passing through it, and its effect depends on current strength (which in turn depends on voltage). If someone receives a shock switch off the electrical supply before removing the casualty. If this is not possible, push casualty away from conductor with a piece of wood or insulator to avoid being a second victim yourself.
c. High frequency burns - Radio frequencies can produce deep-seated burns that are slow healing and painful, although the outward blistering may be slight. All R F Burns, therefore, however trivial in appearance, must receive medical attention.

4.16 Precautions in the use of electricity

BEFORE BEGINNING WORK, FIND OUT WHERE THE ISOLATING SWITCH IS LOCATED.

a. Permanent Wiring - All power cabling, switchgear and permanently installed equipment must comply with statutory regulations and work on them must be carried out in a prescribed manner by authorised personnel. Only Estates approved electricians can make permanent wired connections to service power.
b. Mains Operated Equipment - All new equipment should be checked before use, by an authorised technician. Use suitable cables and leads, properly protected against water, solvents and chemicals,

and strap and secure them neatly. Cotton covered twin cord is unsuitable for laboratory use and as PVC insulation softens at quite low temperature, it should not be used near heaters. All external wiring should be double insulated.

b. Emergency switches and isolators may be required for complex apparatus. They should be accessible and clearly marked. Residual Current Circuit Breakers (RCCBs) should be incorporated on systems that have a potential danger of shock. Portable RCCBs should be used when doing maintenance work away from a protected bench.

c. Portable Equipment - Special care is required with portable equipment. Regular inspections are made for earth continuity, insulation resistance and mechanical condition. But it is the responsibility of the user to check the test label and that the leads have not been damaged before use.

d. Batteries - Lead-acid accumulators give off oxygen and hydrogen under charge. Adequate ventilation is therefore essential in battery charging rooms to avoid a build-up of explosive gasses. Disposal of old batteries is via the stores.

4.17 Radioactivity & Radiation hazards

There are particular risks when working with radiation of all types.

a. Radioactive materials & sources of ionising radiation – the basic principles together with details of the operational aspects of Radiation Protection at the University of Sussex are set out in the University Safety for Radioactive Substances User Procedures . Any undergraduate experiment must have a safe system of work as part of the script, ask the demonstrators. Postgraduates and research workers will need to obtain a university licence before working in laboratories involved in radioactive work.

b. Lasers - In virtually all cases, exposure to the direct beam or even to the reflected radiation must be regarded as hazardous. When such light enters the eye, it is concentrated on the retina and may produce a permanent blind spot. In some circumstances, damage to the lens or skin burns may result. Although the blink reaction gives protection from visible class 1,2 and 3R lasers, (class 3B and above require special precautions). Any undergraduate experiment must have a safe system of work as part of the script, ask the demonstrators. Refer to Lasers on the Science Safety procedures and guidance. Postgraduates and research workers working with lasers of Class 3B or above must see the Laser Safety Video before starting work. The Safety Office must be notified of any new laser of class 3 or above before it is put into use.

4.18 Ultra-violet radiation

Ultra-violet radiation lies in the band of wavelengths from 100-400nm. Ultra-violet quartz-halogen lamps are the most usual sources in the laboratories.

Short exposures from ultra-violet radiation can damage the eye or the skin and injury can result even if one does not look directly at the light. The energy is adsorbed in the outer layers of the eye and conjunctivitis results several hours after exposure, persisting for several days.

Section 5 - Machinery

All aspects of machinery must be controlled and used according to the SPG-02 University Code of Practice for Workshop Equipment and Tools (Formerly SSC-22-7). In addition, managers and supervisors must ensure that all machinery and plant is, where appropriate, regularly inspected and efficiently maintained.

5.1 Safety precautions in Workshops

Whenever you enter a Workshop, if it is not your place of work, you must report to the area supervisor first before working on any equipment.

a. Long hair, and loose clothing are potential hazards when using machine tools. Keep long hair tied back and clothing done up.

b. Ensure that the correct guards are fitted to all moving machinery and that all safety devices are working.

c. Make sure that you know how to switch the machine off in an emergency. Emergency controls should be conspicuously labelled.

d. Machine tools should never be left running unattended.

e. Stop machine tools dead before changing gears, or lubricating. Remove drills, lathe tools and cutter, etc. before cleaning down. Lower circular saw blades when not in use.

f. Never try to handle moving swarf. Even stationary swarf can be sharp and the use of leather gloves is advised.
g. DO NOT LEAVE CHUCK KEYS IN LATHE OR DRILL CHUCKS.
h. Use a vice or clamps to secure the work piece when drilling.
i. Safety shoes are a valuable protection for those handling heavy objects, especially in workshops and stores. Open-toed shoes must not be worn in Workshops.
j. Wear safety glasses or goggles for any machinery process that may cause swarf or particles to be emitted. Use dust and fume extraction equipment where provided and its use is advised. If you wear spectacles - either wear goggles or full shield as well, or get prescription lens safety spectacles.

5.2 Grinding wheels

Grinding wheels are a particular hazard. Goggles must be worn at all times when working on grinding wheels. Changing and dressing wheels should be done by someone trained and officially approved. Consult Workshop Supervisor. Do not clog grinding wheels with soft material and never grind with the side of the wheel either may later cause them to shatter.

5.3 Welding, brazing and casting

These practices can cause a risk of injury to the individual and others and must be carried out only in an area appropriate to the purpose.
To avoid eye damage, proper goggles or face shields must be worn by the welder and anyone else in the welding area. Sightscreens must be placed around the welder and in permanent welding booths; the walls must be painted with non-reflective paint. Welders must wear protective gloves.
Adequate local exhaust ventilation must be provided where welding or brazing is done. Toxic gases are liberated when lead, cadmium and many other materials are heated to welding, brazing or casting temperatures. Refer to sections of SPG-01 LEV and SPG-02 code of practice for workshops.

Section 6 - Pressure & vacuum systems

6.1 High pressure systems

See Pressure Systems

6.2 Compressed gases

See Gas Cylinders, Compressed Air and Cryogenic Gases

6.3 Liquefied gases

Cold liquefied gases and solid carbon dioxide present a number of hazards. Severe burns can result from mishandling, especially if the liquid is trapped in shoes or clothing. Gloves should not be worn when handling liquid nitrogen as the trapped liquid can cause burns.
The rules for filling dewars with liquefied nitrogen are on a notice at the Liquefier Filling facility. You must follow the procedures indicated.
The evaporation of large quantities of liquid nitrogen or the sublimation of large quantities of carbon dioxide in confined areas may result in displacement of oxygen and the risk of asphyxiation.
Liquefied gas containers must be handled carefully at all time.
They must be protected from the weather, i.e. not left out of doors or in conditions favourable to the formation of an ice plug in the neck. Ice plugs can cause a 300 psig pressure build-up and an explosion. Such obstruction of the neck should be cleared with clean metal rods by an operator standing as far away as is practicable.

6.4 Vacuum systems

a. Examine all glass apparatus for strain as it is assembled and after the apparatus is fitted.
b. Avoid stresses between different components by using a plastic tube, where appropriate, or bellows.
c. Wherever possible, glass apparatus should be screened
b. Rubber bungs must be large enough to avoid being sucked into the vacuum vessel. Stopcocks must be properly lubricated and turned slowly. Do not attempt to force a frozen stopcock.

c. Rotary pump outlets should be vented to the outside.
d. The outside surfaces of glass dewars should always be taped, preferably with woven type material (rather than plastic) to avoid the dangers of flying glass.

Section 7 - Office safety

a. Office equipment and furniture can be heavy. Care should be taken when anyone is moving it to avoid undue strain, get help for very heavy objects, see Manual Handling.
b. Four-drawer filing cabinets can over balance if both upper drawers are opened at the same time, do not do this.
c. On electrical equipment do not remove any screwed down covers. On equipment where access is provided to clear jams etc., turn the power off if this does not happen automatically. Turn the power off before cleaning.
b. Ensure all electrical cables are placed so as to avoid creating a tripping hazard.
c. Keep all combustible materials away from electrical heaters. Note that exposed element radiant heaters are banned from all University buildings.
d. Before leaving work switch off all electrical appliances, where it is safe to do so.
e. Do not stand on revolving chairs and stools.

7.1 D.S.E. (DISPLAY SCREEN EQUIPMENT)
Refer to the University Display Screen Equipment Policy and guidance on the Safety Office web pages.

Section 8 - Special hazards

8.1 Asbestos
The discovery of any asbestos in the School must be reported to the School Safety Advisor. For handling and disposal of asbestos See Safety Policy and Local Rules for Work with Asbestos in University Buildings (SSC-48-3). To become SPG-07.

8.2 Disposal of waste
All waste materials must be disposed of in a safe manner.
See Safety Procedures and Guidance SPG-14 Disposal of waste Chemicals and SPG-33 Non chemical/biological Waste. Also there are a number of other Safety Procedures and Guidance documents which give details of disposal of specific waste:-

- SPG -05 for Working with Radioactive Materials and Ionising Radiation
- SPG-10 for the Control and use of Carcinogenic, mutagenic and Teratogenic Substances
- SPG- 25 Work with Human Blood Samples, Human Blood, Products & other Tissue Specimens of Human Origin
- SPG-29 for the Implementation of the Genetically Modified Organisms (contained use) Regulations
- SPG-07 for Work with Asbestos in University Building
- SPG-04Code of Practice for Safe Working with Laboratory Glassware

Disposal of all chemicals, biological and other hazardous material used in projects and research work must be detailed in any risk assessment or COSHH hazard assessment.

8.3 Noise
It is the policy of the University to reduce noise levels, as far as is reasonably practicable, to 80 dBA or less. Managers and supervisors must ensure compliance with the University Safety Procedures and Guidance SPG-12 for implementation of the Noise at Work Regulations 1988 (formerly SSC-61-5).

8.4 Occupational Health Service

The Occupational Health (OH) Service is an independent, contracted service to the. A Consultant in Occupational Medicine and a counsellor are available for one session a week, and a back care advisor for one day a week. The office is open Monday to Friday, throughout the year. (Closed bank holidays). Hastings Building. Extension 7255.

The aims of the service are to:

- provide a confidential OH service to all University employees
- promote employee health and well being
- ensure that work or the working environment does not adversely affect employee health
- promote safe working practices
- promote the rehabilitation of previously sick and injured employees back to work
- assist in risk assessments of the workplace
- act as a resource.

Services provided include pre-employment health screening, management referrals for sickness absence advice, health surveillance (e.g. lung function tests, hearing tests), return to work review, maintenance of confidential OH records, counselling and provision of vaccinations required for work purposes.
Self-referrals are welcome and the OH Advisor, will be pleased see any member of staff to discuss, in confidence, any work-related occupational health and safety matters causing concern.

8.5 Vehicles

Refer to the Safety Office web page and the University Driving at work Policy. Before using any vehicle ensure that it is roadworthy:

- Tyre pressures are correct.
- Tyre tread depth is legal.
- Lights and indicators function.
- Check the washers and wipers work.
- Ensure oil and water levels are correct.
- Ensure the vehicle is loaded safely and not overloaded.
- Check the brakes at the beginning of the trip.

Check the documentation:

- Check that the vehicle and driver are insured for the trip to be undertaken.
- (If you are driving your own car to a conference or field trip, etc., do you have business use cover?)
- Check the vehicle has a current MOT and is taxed.
- Does the driver have the correct driver's license for the vehicle?

Section 9 Hazard & risk assessments

Under the "Management of Health and Safety at Work Regulations 1999 (MOHSW) it is a legal requirement that all Managers, e.g. Professional Service Managers, Heads of Schools and Departments, Research Supervisors, Teaching Faculty and Technical Supervisors, make assessments of the risks to the health of staff, students, visitors and members of the public who may be affected by the activities being assessed.

Safety Procedures and Guidance documents SPG-17 for the implementation of MOHSW, and SPG-19 for Inspections, Monitoring and auditing give further details, all supervisors are required to be familiar with them.

a. Under the above regulations there is a LEGAL requirement to assess the risk associated or posed by any work carried out which is liable to expose any persons to substances or operations which are hazardous to health. It might well be that the hazard/risks associated with the work envisaged are of such a low order that a written assessment would be overstating the obvious, but one must be able to report to the enforcing body that the process of hazard/risk assessments has been undertaken.

b. The copies of completed form must be lodged with the School Health and Safety Co-ordinator prior to any work being undertaken.
c. Each research laboratory must provide a file labelled "Hazard/Risk Assessment Documents". Copies of all documentation pertaining to Hazard/Risk Assessments in that laboratory must be stored in this file and prominently displayed in the laboratory.
d. Every Hazard and Risk Assessment must contain information on the hazards, e.g. electricity, high pressure, laser radiation. The risk to health must be outlined together with the preventive and protective measures to be taken. The assessment must clearly also deal with the risk to health due to the toxicity of any chemicals involved as well as their reactive risks e.g. fire/explosion.
e. Student Supervision. Faculty are responsible for the supervision of students. This includes not only the writing of the above assessments etc., but also making the students aware of them and supervising the students to ensure that they are followed. This covers all laboratories, teaching and research.

Appendix 1
SAFETY PROCEDURES AND GUIDANCE DOCUMENTS
All available on www.sussex.ac.uk/hso/healthandsafety/science-safety-procedures-and-guidance

Centrifuges
Confined Spaces
Control of Poisons and Other Regulated Chemicals
Disinfection
Display Screen Equipment - Safety Advice for Users
Driving At Work
Electricity At Work Regulations
Electrophoresis Apparatus
Emergency Spillage
Gas Cylinders, Compressed Air and Cryogenic Gases
Glassware - Laboratory
Genetic Modification
Hazardos Waste Materials (Non Chemical-Biological - Radioactive)
Lasers
Local Exhaust Ventilation
Local Rules for COSHH
Management of Health and Safety At Work Regulations
Manual Handling
New and Expectant Mothers at Work
Noise
Notes to aid COSHH risk assessment
Personal Protective Equipment
Pressure Systems
Safe Storage of Chemicals
Science School Safety Handbook
Transport of Dangerous Materials
Work Equipment
Working Outside Normal Working Hours
Workplace
Workshops - Equipment and Tools
X-Ray Equipment

Appendix 2
SAFETY POLICIES.

Asbestos Management Policy [PDF 33KB]
Control of Hazardous Substances Policy [PDF 39KB]
Control of Noise At Work Policy
Display Screen Equipment (DSE) Policy
Driving at Work Policy
Fire Policy 2007 [PDF 64KB]
Food Safety Policy [PDF 72KB]
Health, Safety and Wellbeing Policy [PDF 115KB]
Legionella Safety Management Procedure
Lone Working Policy [PDF 52KB]
Manual Handling Policy [PDF 32KB]
Management of Contractors Policy
Management of Contractors Statement
Prevention and Management of Violence Policy [PDF 36KB]
Radiation Policy 2007 [PDF 46KB]
Smoking Policy [PDF 48KB]
Waste Management Policy