

***FACULTY OF COMPUTING AND ENGINEERING***

***HEALTH AND SAFETY GUIDE***

***SCHOOL OF COMPUTING AND INFORMATION  
ENGINEERING***

***2012-2013***

**Emergency Internal 24-Hour  
Telephone Number  
For all campuses: Ext 22222**

**Helpline for reporting maintenance  
hazards to Physical Resources  
For all campuses: Ext 23456**

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## **INTRODUCTION**

This guide has been prepared to assist students and staff in the School of Computing & Information Engineering to study and to perform their duties safely and in compliance with the Health and Safety at Work (NI) Order 1978 and associated legislation.

An important function of this guide is to help YOU to prevent accidents and eliminate hazards to health. It gives basic information on safety and the regulations specific to the Faculty and suggests ways in which you can adjust your workstation to enable you to have a more comfortable working environment and to avoid any potential problems. Please read the guide carefully and make sure you know the location of fire extinguishers, first aid boxes and emergency exits, and that you know the emergency telephone numbers on your campus.

The Faculty will enforce the safety regulations laid down in this manual, and will instigate appropriate disciplinary action against staff or students who disregard the regulations. It should be noted that repeated offences, or an act of gross negligence that puts the safety of the individual concerned and/or others at risk, may result in dismissal from employment or removal from the course of study, as specified in the Terms and Conditions of Service for Staff and in the Student Guide. In certain circumstances the individual concerned may also be liable to prosecution in the courts.

The University operates a “no smoking policy” throughout its premises. This applies to all Faculty laboratories, teaching rooms and individual staff rooms.

The Faculty’s aim is to create a safe and healthy environment and to prevent, where possible, accidents or injuries. This can only be achieved with your full cooperation. Creating a safe and healthy environment is largely a matter of good sense and good housekeeping and I would urge you to use the reporting procedure outlined at the end of the manual to make the Faculty aware of any potential hazards.

**Professor Richard Millar**  
**Dean, Faculty of Computing and Engineering**

## GENERAL REQUIREMENTS

It is the duty of all staff and students:

- to operate equipment with due regard to good safety practice;
- to report to appropriate Faculty Staff any defects or indications of malfunction in equipment which might result in accidents;
- to use the safety apparatus provided;
- to follow instructions posted within the University on public safety;
- to follow University safety requirements and the general safety code of the Faculty of Computing and Engineering.

## FIRE/EMERGENCY PROCEDURES

Notices showing fire/emergency procedures are displayed throughout the University. On discovering a fire, no matter how small, you should:

- raise the alarm by breaking the nearest fire alarm glass;
- report it immediately by telephoning or contacting a member of security staff;
- warn people in the vicinity of the fire;
- only attempt to tackle a fire using the appropriate fire extinguisher or hose reel if it is safe to do so and you have received specific training in the use of extinguishers;
- ***IF NECESSARY LEAVE THE BUILDING – DO NOT TAKE PERSONAL RISK;***
- on hearing the fire alarm leave the building at a rapid walking pace by the nearest available exit;
- ***DO NOT STOP TO COLLECT PERSONAL BELONGINGS;***
- ***DO NOT USE LIFTS;***
- assemble in a safe place at least 50 metres from the building. ***DO NOT RE-ENTER THE BUILDING*** until you are told by a member of security staff that it is safe to do so.

## GENERAL SAFETY CODE

### FACULTY OF COMPUTING AND ENGINEERING

- On entering a work area for the first time, **take time to note** the positions of EXITS, EXTINGUISHERS, TELEPHONE and FIRE ALARM BREAK GLASS POINTS.
- Check where the nearest First Aid Kit is kept. Locations of First Aid Boxes and Registered First Aiders are listed on pages 10 and 11 of this Guide and posted on notices in laboratories and corridors throughout the Faculty premises.
- Make sure that you know which extinguishers are suitable for electronic and/or electrical fires. This information is on the casings of the extinguishers themselves and on notices posted beside them.
- Staff must be aware of their duties and responsibilities as outlined in the University's *Health and Safety Policy Document* and its *Guide to Health and Safety*. These documents and forms relating to the monitoring and reporting of Health and Safety issues can be accessed at:  
<http://www.ulster.ac.uk/hr/healthandsafety/>
- While in a work area students must, at all times, use common sense, exercise care and conduct themselves in a responsible manner. Students must use equipment ONLY with the approval of a member of staff.
- If equipment appears to be faulty, students SHOULD NOT ATTEMPT A REPAIR. Report the fault promptly to a member of academic or technical staff. If equipment is labelled **Out of Service** students must not use it.
- If your health changes in any way which affects your personal safety, or the safety of others, you must tell your Course Director (for students) or your Line Manager (for staff).
- EVERY case of accident must be reported. If a student is involved a member of staff must be informed and where a member of staff is involved his/her line manager must be informed. An Accident Report Form (see Appendix 1), available from the Faculty/School Office on each campus, must be completed and promptly returned. The Faculty will notify Health and Safety Services of each incident.
- Students should not move or lift heavy items of equipment. If it is necessary to do so, contact Faculty Technical Staff.
- Food or drink must not be brought into, or consumed in, computer work areas.
- Computer work areas must be kept tidy.
- Unwanted printout should be disposed off in the bins provided.
- Bags should not be left so that they cause a hazard or obstruction.
- Never use cables to lift, pull or disconnect equipment.
- If you suspect that someone is suffering from ELECTRIC SHOCK – DO NOT TOUCH THE CASUALTY. Switch off the power if it is safe to do so. Get help from a member of Faculty staff qualified in first aid or a member of the security staff who are all qualified in first aid.

## **OFFICE SAFETY**

Attention should be paid to the following points.

- Good layout is important, with a clear passage to the escape route for all occupants.
- Trailing cables to personal computers, printers, typewriters etc must be avoided.
- Heavy items must not be stored on top of filing cupboards. A ladder should be used when it is necessary to reach high level shelves – chairs must not be used for this purpose.
- Care should be taken when opening filing cabinets. Some older models do not have safety devices and may tip forward.
- All staff who are regular display screen users are required to complete a training programme. This course is available via WebCT.

## **WORKING WITH DISPLAY SCREEN EQUIPMENT**

Below is some general advice about working with display screen equipment (VDUs).

- Adjust your chair and display screen to find the most comfortable position for your work. As a broad guide, your arms should be approximately horizontal and your eyes at the same height as the top of the display screen casing.
- Make sure there is enough space underneath your desk or workspace to move your legs freely. Move any obstacles such as boxes or equipment.
- Avoid excess pressure on the backs of your legs and knees. A footrest, particularly for smaller users, may be helpful.
- Don't sit in the same position for long periods. Make sure you change your posture as often as practicable. Some movement is desirable, but avoid repeated stretching to reach things you need.
- Adjust your keyboard and screen to get a good keying and viewing position. A space in front of the keyboard is sometimes helpful for resting the hands and wrists while not keying.
- Don't bend your hands up at the wrist when keying. Try to keep a soft touch on the keys and don't over-stretch your fingers. Good keyboard technique is important.
- Try different layouts of keyboard, screen and document holder to find the best arrangement for you.
- Position the mouse within easy reach so that it can be used with the wrist straight.

- Make sure you have enough work space to take whatever documents you need.
- Arrange your desk and screen so that bright lights are not reflected in the screen. You shouldn't be directly facing windows or bright lights. Adjust curtains or blinds to prevent unwanted light.
- Make sure the characters on your screen are sharply focussed and can be read easily. They shouldn't flicker or move.
- Make sure there are no layers of dirt, grime or finger marks on the screen.
- Use the brightness control on the screen to suit the lighting conditions in the room.

## **WORKING ALONE**

Staff and students may often be working in offices and or labs beyond normal working hours and hence may be in a situation where they are working alone. Although we operate in a low risk environment, sensible precautions are still necessary to ensure safety even when the likelihood of incidents is very low. Hence if you are working outside normal working hours and hence may be working alone:

- Ensure someone knows where you are
- Ensure someone knows when you are expected back

In addition, if you are working alone for an extended period of time, you should arrange for someone to contact you at predefined intervals. In the event of an emergency, all labs have a telephone which can be used for internal calls. The University's emergency extension number across all campuses is 22222.

## **SAFE USE OF ELECTRICAL EQUIPMENT**

When used in the correct manner and properly maintained, electrical equipment is quite safe. However, misuse or lack of maintenance can lead to risk of fatal electric shocks or fires and explosions.

If you have any queries about electrical equipment, please consult technical staff. When using electrical equipment, please ensure that:

- there are no loose connections;
- cables are not damaged;
- there are no trailing cables;
- you do not spill any liquids.

The use of personally owned electrical equipment on University premises is discouraged, and prior approval must be obtained from your Line Manager if you wish to bring in any such items. You must ensure that any item you own, including the cable, is not mechanically damaged and that the plug is correctly wired and fused. You must also make sure that any personally owned items are added to your School/Faculty electrical testing inventory. Personal heating equipment of any kind is not permitted.

## **SAFETY PROCEDURES IN PRACTICAL CLASSES IN COMPUTING LABS**

The following procedures are designed to address the safety aspects that arise in classes where the students and staff open up the computer system units, add peripherals to the computers, or use cables to connect computers together. Because of the danger of electric shocks it is particularly important to follow the safety procedures laid down.

### **1. Preliminary Precautions**

In order that free access can be made to the front and back of computers, before starting practical work students should place all belongings, other than laboratory notes and tools supplied by the Lecturer/Demonstrator, on the benches at the side of the room. All chairs not in use should be pushed fully in to the bench.

### **2. Prior to Opening System Units**

In general, if the class involves all the computer system units being opened up at the same time, then the electrical power supplied to the computers must be shut off and only switched on again when the Lecturer/Demonstrator is satisfied that it is safe to do so. The Lecturer/Demonstrator uses a special key, which switches off the power to all benches in the room. The Lecturer/Demonstrator must keep

the key at all times to ensure that the power cannot be reapplied by anyone else. The students can then be instructed to:-

- shut down the software on the computers correctly;
- switch off the computer system unit and monitor;
- switch off the plugs on the bench;
- remove the power connection from the computer system unit and the monitor.

The power in the laboratory can be switched off by the Lecturer/Demonstrator at this point and the system units can now be opened safely.

### **3. During the Class**

During the class the students may add interface cards and peripherals or add/remove system board components like memory, processor, etc. The Lecturer/Demonstrator must ensure that the students replace/add components correctly before closing the system units. Once all covers are back on the computers the power can then be reapplied safely to the computer laboratory.

If the students need to add cables or peripherals to the computers they must ensure that all wires and leads are placed in such a manner that they will not present a tripping hazard.

### **4. Exceptional Circumstances**

In certain situations the above procedures will prove over-restrictive for the successful progress of a practical class. For instance, where some students work much faster than others, or students are required to work on different activities, which take different lengths of time. In these circumstances students may be unreasonably held up in their work if they have to wait for the whole class to be ready for the power to be switched on.

In these cases, where there is an adequate staff-student ratio, there are two options that can be considered:-

- Use the above safety precautions on a bench by bench basis, rather than the whole laboratory at a time.
- Use the above safety precautions, but instead of switching off power in the laboratory, the Lecturer/Demonstrator removes the fuse from each PC to avoid power being inadvertently supplied to a computer. The fuse can be replaced by the Lecturer/Demonstrator, if safe to do so, to allow students to turn on the computer.
- Where it is not physically possible to remove the computer's fuse, all power cables may be removed instead.

## **SAFETY PROCEDURES FOR ELECTRONICS LABORATORIES AND WORKSHOPS**

Laboratories and Machine Workshops are potentially dangerous areas.

To avoid risks to yourself and others when in these areas **you must:**

- Follow the instructions given by the lecturer in charge.
- Read carefully the "Code of Good Practice" which you will receive prior to commencing laboratory or workshop activities.
- Wear safety clothing and equipment as instructed, for example, protective clothing, eye protectors, safety gloves.
- Under NO circumstances should students work with live equipment.
- Adopt behaviour appropriate to an area in which there are potentially dangerous equipment and activities.
- Dispose of waste materials only as instructed.
- DO NOT under any circumstances use any machine, apparatus or substance if you think it might be unsafe or unhealthy to do so.
  - (Bring this to the attention of the member of staff in charge immediately.)
- DO NOT leave experiments or other operations unattended without prior approval of the lecturer in charge.
- DO NOT operate or adjust equipment until a member of staff has shown you the correct method.

YOU could be held responsible for any injury caused by either your action or your failure to take action when instructed.

## **CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH (COSHH)**

The use of chemicals is restricted to the technicians' workshop with the exception of solvent cleaners for workstations. When using solvent cleaners adequate ventilation is essential.

Contact should be made with Health and Safety Services (Ext. 66952) if an unforeseen problem arises with any aspect of chemical use.

## **SAFETY FOR TECHNICAL SUPPORT STAFF**

- When carrying out soldering work, ensure that you use the ventilation system.
- When maintaining equipment with electrical or electronic components make sure that, if the operation permits it, the power is switched OFF and take steps to prevent other persons accidentally restoring the power.
- Ladders or steps should, where possible, be made secure before use. Objects should not be left at the top of step ladders.
- Temporary cabling for equipment should be installed in such a way that there are no hazards from trailing leads.
- Where any maintenance requires the removal of ceiling tiles or could cause a hazard from trailing cables, access to the work area must be restricted or the work should be completed outside normal working hours.

## **HEALTH & SAFETY GUIDANCE FOR STUDENTS ON PLACEMENT**

Students undertaking placement will be required to comply with the Health & Safety regulations of their employer. Students are also required to read the Health & Safety Guidance Notes at the following link and complete the checklist on the back cover within one week of commencing placement; this will be reviewed by the Placement Supervisor during his/her visit.

[http://workexperience.ulster.ac.uk/pdf/Health&Safety\\_text.pdf](http://workexperience.ulster.ac.uk/pdf/Health&Safety_text.pdf)

Further information is available at:

[http://workexperience.ulster.ac.uk/staff/downloadable\\_docs.phtml](http://workexperience.ulster.ac.uk/staff/downloadable_docs.phtml)

## FIRST AID AND EMERGENCY FACILITIES

### COLERAINE CAMPUS

First Aid Boxes: L140  
L143

Registered First Aiders: Dr Michaela Black Room L140 Ext 23071  
Jane Fraser Room L143 Ext 24440

Telephone Numbers: Emergencies 22222 (24 hrs)  
University Security 24480 (24 hrs)  
  
Student Health Service 24382 (weekdays)  
  
Doctors Surgery 028 70342650  
4 Mountsandel Road  
Coleraine  
Fire/Police/Ambulance 9-999

**PLEASE NOTE THAT EVERY MEMBER OF SECURITY STAFF IS QUALIFIED  
IN FIRST AID.**

## REPORTING HAZARDS

Hazards relating to laboratories, research and teaching areas, and all equipment should be reported to Tony Mc Laughlin.

Email	<a href="mailto:ja.mclaughlin@ulster.ac.uk">ja.mclaughlin@ulster.ac.uk</a>
Telephone	028 70124494
Office	L019

Hazards relating to the working environment generally (eg light not working, lifting carpets, broken windows) should be reported to the Department of Physical Resources:

Help desk for all campuses	Ext 23456
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Hazards which cannot be dealt with through these routes or which may need to be considered by the Faculty Health and Safety Committee should be reported to the Head of School, Mr Martin Mc Kinney:

Email	<a href="mailto:met.mckinney@ulster.ac.uk">met.mckinney@ulster.ac.uk</a>
Telephone	028 70124495
Office	L142

## **APPENDICES**

**APPENDIX 1      ACCIDENT REPORT FORM**

**APPENDIX 2      TERMS OF REFERENCE AND MEMBERSHIP OF  
FACULTY HEALTH AND SAFETY COMMITTEE**



Use this space for a sketch plan where necessary:

Was the person authorised to carry out this activity ? YES / NO

Detail any equipment, tools, objects, substances, etc. which were involved:.....  
.....

Detail any known defects:.....  
.....

Did the University organise for the injured party to be taken directly to hospital ? YES / NO

Did he / she become absent from work as a result of the accident ? YES / NO / NOT KNOWN

If YES, date ceased work:..... Date of return to work:.....

\* If the person is seriously injured, has been taken directly to hospital, or has been absent from work for more than 3 days as a result of the accident then the line-manager must inform Health and Safety Services at the earliest opportunity (ext. 6952)

**SECTION 4 - RECOMMENDATIONS TO PREVENT RECURRENCE**.....  
(to be completed by the line manager)

Have all relevant Risk Assessments been reappraised ? YES / NO

Where appropriate please forward copies of relevant risk assessments with this Accident Report Form to Health & Safety Services

Signature of person completing report:..... Name (block capitals):.....

Job title:..... Date:..... Ext:.....

**UNIVERSITY HEALTH CENTRE / FIRST AID REPORT**.....

Signed:..... Name (block capitals):..... Date:.....

**HEALTH AND SAFETY SERVICES REPORT:**.....

Signed:..... Name (block capitals):..... Date:.....

## **FACULTY OF COMPUTING AND ENGINEERING**

### **FACULTY STATUTORY HEALTH AND SAFETY COMMITTEE**

#### **TERMS OF REFERENCE**

Terms of Reference and Membership of this Committee are currently the subject of consultation with Trade Unions.

- a) To monitor the day to day implementation of the health and safety policy within the Faculty's activities and areas.
- b) To deal with unresolved health and safety issues.
- c) To monitor and review the practical implementation of new legislative requirements or changes in the health and safety policy within areas under the Faculty's control as recommended by the Head of Health and Safety Services or the University Health and Safety Management Standing Committee.
- d) To consider reports from enforcing authorities, reports and other data from internal inspections, surveillance, monitoring, accidents, incidents and dangerous occurrences relating to their areas and to make recommendations to the Dean, Head of School/Department, Research Institute Director or the Head of Health and Safety Services for consequent improvements to health and safety procedures.
- e) To monitor and review the effectiveness of health and safety training within the Faculty's areas and to make appropriate recommendations to Health and Safety Services.
- f) To report to the University Health and Safety Management Standing Committee for the purposes of monitoring aspects of health and safety policy implementation within their areas and to make recommendations regarding changes in safety policy or procedures, as appropriate, with regard to the implementation of these within their areas.
- g) To receive the School/Departmental annual reports on health and safety.
- h) To consider recommendations or complaints from staff or students and recommend appropriate action.

In reaching decisions the Committee will have due regard to their impact on, and implications for, the University's commitment to ensuring equality of opportunity, and good relations as outlined in its Equality Scheme, and associated policies, and where possible and practicable the Committee will ensure that its actions are proactive in this respect.

The Committee will normally meet three times a year.

## **MEMBERSHIP**

The composition of the Committee is established by the University Safety Policy.

Dean (Chair)

Heads of School

Head of Research Graduate School

Directors of Research Institutes

Head of Faculty Administration

Trades Union Representatives

School Safety Coordinators

One member of staff from each School

Co-opted members as appropriate

### **In attendance**

Faculty Head of Computing and Engineering Services