

The Schools of
Electronic Engineering
and
Computer Science
and
Industrial Development Bangor
(UWB) Ltd

Safety Policy
2006-2007



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Professor K A Shore _____
(Head of Department)

SAFETY POLICY

It is the policy of the School of Informatics to maintain high standards of safety in School activities in accordance with the General Safety Policy of the College, and to implement the code of practice demanded by the Health and Safety at Work Act (1974) within the framework of the Code of Practice laid down by the Committee of Vice-Chancellors and Principals (1974).

The Head of School (or in his absence his deputy or the senior member of the academic staff) carries the ultimate responsibility for all the aspects of safety matters. This includes provision of the appropriate facilities and conditions for safe working in accommodation occupied by members of the School, and the responsibility for ensuring that all members of staff and students of the School are aware of appropriate safety precautions. However, it is an important consideration in the implementation of the School Safety Policy to involve the whole of the academic staff and senior members of the technical staff and to encourage all staff and students of the School to accept personal responsibility for developing high standards of awareness of hazards and for adopting safe practices.

The School Safety Policy is reviewed and updated annually by the School Safety Officer with inputs from the academic and technical staff.

B. Organisation

The Head of School shall nominate a School Safety Officer and a deputy to assist and advise on safety matters. In addition, other nominated members of staff shall provide specialist advice or supervision on safety matters related to various working areas, particularly activities involving special hazards and the use of special facilities. A directory of these individuals, including their fields of responsibility, appears as Appendix A to this document. This will be circulated to all members of the academic staff, postgraduate students of the School, technical staff, posted on notice boards and updated as necessary.

Details of the organisation and of particular responsibilities for safety policy in the School and the nominated member of staff with specialist knowledge who are responsible for consultation are listed below.

School Safety Officer and Deputy – General Responsibilities

- i) To advise the Head of School about any action necessary on his part concerning general aspects of safety in the School and matters related to Health and Safety.
- ii) To monitor the arrangements for general matters of safety in the School which are not included in the remit of the individual safety supervisors including ensuring that safe working conditions are provided and adopted by all staff and initiating any necessary remedial actions.

- iii) To monitor all aspects of fire prevention measures in School accommodation and to supervise the arrangements for safety procedures in the event of fire.
- iv) To disseminate as appropriate any information on matters of safety which comes to his attention and particularly to ensure that relevant information is received by individual safety advisers.
- v) To monitor and advise on the implementation for the Control of Substances Hazardous to Health (COSHH) Regulation within the School.
- vi) To ensure that any new hazards which may be introduced in the School are notified to the College Safety Officer.
- vii) To update as necessary the School Safety Policy or its appendices and to circulate or display these appropriately.
- viii) To liaise, as necessary, with the College Safety authorities and to act as the School representatives on committees concerned with safety matters.

Responsibility for Chemical Hazards

- i) To advise the Head of School of any action necessary on his part in relation to chemical hazards.
- ii) To advise staff and students in the School about chemical hazards and of the codes of practice which should be adopted for work which involves such hazards. To assist with hazard assessments required for the implementation of the Control of Substances Hazardous to Health (COSHH) Regulations.
- iii) To advise, when necessary, any workers in the School who may have suffered exposure to hazardous chemicals.
- iv) To advise, when necessary, on the disposal of dangerous chemicals.
- v) To liaise with the Biological and Chemical Hazards Safety Committee.

Workshop Safety

- i) To advise the Head of School of any action which is required on his part to maintain the necessary standards of safety in the various workshops in the School.
- ii) To ensure that workshop equipment is used by competent authorised individuals only.
- iii) To ensure that appropriate safety precautions are compiled with at all times in the workshops.

iv) To liaise, as necessary, with the College Safety Officer through the School Safety Officer on matters concerned with safety in the workshops.

Safety Advisory and Supervisory Duties of the Departmental Superintendent.

i) To advise the Head of School of any action necessary on his part which is required to maintain the necessary standards of safety in the School in those areas which are detailed below and which are the direct responsibility of the Departmental Superintendent.

ii) To ensure, as far as possible, that there is compliance with the Code of Practice for wet laboratories.

iii) To ensure, in conjunction with the technicians servicing chemical laboratories, that the storage of all chemicals is satisfactory, including the special arrangements required for flammable solvents and that all dangerous chemicals are stored in a locked cupboard and where necessary proper records of these are maintained, and that safe disposal practices of dangerous chemicals are operated.

iv) To monitor, as far as possible, there is compliance with the safety precautions concerned with the use and storage of compressed gases.

v) To ensure that names of individuals who have received first aid training and first aid instructions are prominently displayed, that adequate first aid cabinets are available and installed in suitable places, that the contents are regularly checked and if necessary replaced, and that special first aid materials recommended by the appropriate safety advisers are available.

vi) To monitor general aspects of safety in the teaching laboratories and other rooms which do not fall within the remit of other members of staff.

Safety Responsibilities of Other Staff

Notwithstanding these provisions, all members of staff shall concern themselves about all aspects of safety relating to individuals whose work they control or supervise. In particular, members of the academic staff supervising the work of research assistants, postgraduate research students and technicians (including Contract Research Staff) shall ensure that:-

- a) The School Secretary is given the names of the supervised persons and their period of contract / studentship.
- b) They are given a copy of the Codes of Practice for Postgraduates and Staff (Appendix B to this document).
- c) They are aware of particular hazards associated with their work and the appropriate safety precautions.

- d) They comply with all appropriate codes of practice or precautions.

In addition, individual members of staff are expected to monitor safety standards in the rooms or areas for which they have a general responsibility. They should liaise with the School Safety Officer to ensure that high standards are maintained.

The Departmental Superintendent / School Safety Officer shall similarly be expected to ensure that safe working methods are adopted by members of the technical staff when they are working under their direct orders, but this responsibility shall devolve to any member of the academic staff who may at times be directly controlling the work of a technician.

All members of staff shall report to the Departmental Superintendent / Safety Officer any faulty equipment or apparatus which comes to their notice and which may be dangerous and to report to Departmental Superintendent / Safety Officer or the Head of School, any deficiencies in general laboratory facilities or equipment which seriously limit or prevent safe working practices. In the unlikely event that the implementation of necessary safety measures necessitates an important change in the mode of working of an individual for whom a members of staff is responsible and that this cannot be easily arranged by mutual agreement, the circumstance should be reported to the Head of School.

Control of Substances Hazardous to Health (COSHH) Regulations

All members of staff have a duty under these Regulations to control the exposure of persons under their supervision, to substances hazardous to health. For every activity undertaken at work involving such substances, including for example, undergraduate practicals, post-graduate experiments, or technical support activities, a “suitable and sufficient” assessment **must** be made before work commences. Full details of the implementation of the COSHH Regulations and guidelines or risk assessment are available from the School Safety Officer.

Supervision of Students

All academic staff, postgraduate students and undergraduate students doing projects are advised to read and abide by the “Code of Practice for the Supervision of Students in Laboratories”. Which gives guidance on the degree of supervision required in different circumstances.

No student and in particular undergraduate students will handle any hazardous substance without being supervised at all times by persons having appropriate training **and** qualifications and having attending the chemical safety course in the Department of Chemistry or (Biochemistry for biohazards).

APPENDIX A

DEPARTMENTAL SAFETY SUPERVISORS AND ADVISERS

The members of staff listed below have particular responsibilities to supervise and monitor, as necessary, particular aspects of the Department Safety Policy. Other workers in the laboratory should consult these individuals for information and advice regarding particular hazards to which their work may expose them.

School Safety Officer	Mr R G Williams
Deputies	Mr. J Cambridge
Electronics Workshop Safety Supervisor and Departmental Superintendent	Mr R G Williams
Clean Room Manager	Dr Paul Sayers
Laser Protection Supervisor (LPS)	Mr. R. G. Williams
Mechanical Workshop Safety Supervisor	Mr. R G Williams
First Aiders	Mr. D. T. Davies Dr. Paul Sayers Miss Janet Lancaster
Teaching Laboratory Supervisor	Mr D W Poirot
Industrial Development Bangor (UWB) Ltd.	Dr G Roberts Mr P J Forster

APPENDIX B

SAFETY GUIDANCE NOTES FOR POSTGRADUATES AND STAFF

Contents:

- A. General Laboratory Practice
- B. Fire
- C. Electricity
- D. Gas
- E. Flammable Liquids
- F. Hazardous Substances (COSHH)
- G. Poisons
- H. Potentially Hazardous Techniques and Equipment
- I. Refrigeration and Deep Freezers
- J. Compressed Gas Cylinders
- K. Security

A. GENERAL LABORATORY PRACTICE:

- **FOOD OR DRINK MUST NOT BE TAKEN INTO OR CONSUMED IN LABORATORIES.**
- **NO SMOKING IN LABORATORIES / DEPARTMENT**
- **LABORATORY COATS MUST BE WORN IN CHEMISTRY LABORATORIES**
- **NEVER PIPETTE CHEMICALS BY MOUTH**
- **PROTECTIVE GOGGLES AND GLOVES MUST BE WORN WHEN HANDLING CORROSIVE CHEMICALS AND AT OTHER APPROPRIATE TIMES.**

All procedures involving substances hazardous to health shall be properly assessed under the Control Substances Hazardous to Health (COSHH) Regulations before work commences (see Section G). Furthermore, supervisors and students shall, follow the “Code of Practice for the Supervision of Students in Laboratories”. If in doubt about COSHH Regulations of Codes of Practices, consult the School Safety Officer.

No work involving the use of potentially dangerous techniques apparatus or toxic chemicals shall be undertaken outside working hours without permission from the student’s supervisor AND unless there is at least one other person in the same laboratory or in an adjoining room.

All students shall be responsible for keeping their working area tidy to reduce unnecessary risks of accidents. Fume cupboards labelled as functional must not be used for storage. They will be checked at regular intervals so that any material in use, or on-going experiments in fume cupboards, must be clearly labelled as such giving the student’s name. At the completion of the student’s studies, it is the responsibility of the student and his supervisor to ensure the working area is completely cleared and free of any hazard. All hazardous chemicals must be properly labelled and correctly packaged.

B. FIRE

Check that you know the location of fire extinguishers and that you know the procedures to be adopted in the event of fire. Details are displayed on notice boards and in other prominent places in the building.

C. WATER SUPPLY

Connections to water points must be properly secured and if water is to be left running through apparatus overnight, the tubing must be securely fixed to the tap. Where apparatus is connected to the water supply for long periods, reinforced tubing fastened with jubilee clips must be used. Remember that water pressure rises at night when demand is low.

Water taps must be turned off after use and must not normally be left on overnight. Where water must be left running, ensure that the sink-drain and overflow are free of obstructions and adequate to deal with the flow.

D. ELECTRICITY

No member of the School is authorised to interfere with main fuse-boxes. These are the responsibility of the Estates Department, and any faults should be reported to them through the Departmental Superintendent.

Particular care must be taken when working in wet labs or wet areas. Unauthorised connections or alterations to electrical equipment are forbidden in such locations. All authorised electrical connections must be checked by the technician in charge of the wet area before use.

Connecting wires should be as short as possible and secured to ensure that they do not trail.

Extension cables longer than 2m may only be used with the approval of the Departmental Superintendent. This does not apply to temporary use of cables for electrical tools.

High tension leads must be conspicuously labelled as such.

The School Safety Officer / Departmental Superintendent must be informed at once if any electrical equipment blows a fuse or causes an earth leakage circuit breaker to trip. Such equipment must not be used again before appropriate testing has been carried out.

Any doubts about electrical connections should be reported to the School Safety Officer / Departmental Superintendent immediately.

All electrical equipment in the School is safety tested and its continued use signified by a signed sticker. Equipment without such a sticker ***May not be used*** under any circumstances. The use of apparatus, which fails the safety test will cease ***immediately***. There can be no relaxation of this requirement for any reason. Such apparatus will be removed from the laboratory where it is used to a place of safe keeping until it is repaired and retested under the direction of the Departmental

Superintendent. For major items, which cannot be easily moved these will be disabled by the removal of the mains plug. / fuse.

E. GAS

Connections to gas points must be kept short and should be securely fixed. All gas taps must be turned off overnight and at all times when a laboratory is left unattended. Individuals concerned are responsible for seeing that burners are extinguished and the last person to leave the laboratory is responsible for checking that all gas taps are turned off.

F. FLAMMABLE LIQUIDS

Storage and use: To reduce risks of fire, quantities of flammable solvents greater than 50cc must be kept in fireproof cupboards below bench level except when actually in use. All containers of inflammable materials must be kept stoppered at all times except during transfer of the material. They must be kept away from heaters and open flames. Remember that the vapour of some solvents (e.g. ether) is heavier than air and may flow along bench tops or the floor. This can greatly increase the risk of explosions.

Normally no more than one Winchester of any one flammable solvent should be in a laboratory at one time. Solvents should not be stored in refrigerators, except those designed for that purpose, as there is a risk of explosion. If you need to store solvents at low temperature, consult the Safety Officer.

Work involving the use of large quantities of solvent, (particularly distillation) must be carried out in an appropriate fume cupboard.

Disposal: Inflammable liquids immiscible with water must not be poured down the drains. Used solvents must be put in a suitable container, labelled and disposed of in the periodic collections organised by the Safety Officer.

G. HAZARDOUS SUBSTANCES

The Control of Substances Hazardous to Health (COSHH) Regulations is designed to control the exposure of persons at work to substances hazardous to health.

The Regulations apply to the following types of substances: -

- a) Substances listed as very toxic, toxic, harmful, corrosive or irritant.
- b) A substance for which Occupational Exposure Standards (OES) or Maximum Exposure Limits (MEL) have been set.
- c) Microorganisms, which create a hazard to human health.

- d) Dust of any kind when present at a substantial concentration in the air.
- e) Any other substance not mentioned (a) – (d) which creates a comparable health hazard.

An initial assessment must be made of the hazards of any procedure involving substances hazardous to health **before work commences**. This assessment will include identification of the substances involved, what effect those substances can have on the body, details of the methods to be employed to eliminate or reduce exposure, and where appropriate details of medical surveillance.

Many procedures will be able to be carried out using standard Good Chemical Laboratory Precautions. Where these are not adequate, a Specific Assessment will be required.

Full details of the implementations of the COSHH Regulations and guidelines in Risk Assessment are available from the School Safety Officer, and must be consulted when in doubt. COSHH forms in a book format together with notes as to their use are available from the Safety Officer.

H. POISONS

Storage and use: Schedule 1 poisons **must** be kept in a locked poison cupboard. Those wishing to use these substances **must** see the Chemical Hazards Safety Adviser. Poisons retained and poisonous solutions made up must be clearly labelled with the adhesive 'POISON' labels (obtainable from the stores), the name of the compound and use, concentration. They must be kept in a locked cupboard when not in use. These regulations also apply to narcotics.

Disposal: All Schedule 1 poisons and narcotics must be taken to the Safety Officer who will supervise their disposal.

Use of Cyanide: Cyanide antidotes are not available in the department. Any work involving cyanides must be done in, and in conjunction with, the Chemistry Department.

Mercury Spillage: Mercury is a toxic substance and spillage must be reported to a senior member of the technical staff. A mercury vapour meter is available in the College.

Hydrofluoric Acid (Hf) may not be used in the School without prior consultation with the safety officer. The safety officer will review procedures for the use of Hf with the academic concerned and ensure that safe practices and appropriate remedial materials are in place before COSHH forms are signed.

I. POTENTIALLY HAZARDOUS TECHNIQUES AND EQUIPMENT

All workers are responsible for informing themselves of the hazards involved in the work they are doing.

Before using potentially dangerous equipment (e.g. autoclaves, centrifuges, etc) ensure you understand how to operate it and that you are aware of the hazards involved and that it is in working order.

If in doubt consult your supervisor, a senior member of the technical staff, or the School Safety Officer, **before you start work.**

J. REFRIGERATION AND DEEP-FREEZERS

All containers must be clearly labelled with the name of user and contents. Refrigerators will be cleared out at intervals and all unlabelled material will be disposed of.

Food items may not be stored in refrigerators except in the School Kitchen.

K. COMPRESSED GAS CYLINDERS

Cylinders must be kept in a cylinder trolley or stand, or must be chained to the bench. No tools other than proper cylinder keys are to be used on them, and gas must not be withdrawn from them unless a proper reduction valve is fitted. Where appropriate, safety valves should also be incorporated into the system. Immediately after use the main valve must be closed, the gas must be bled, and the adjusting screw loosened. Remember that even small leaks can build up to toxic or explosive concentrations overnight.

Never use grease or oil on the threads or valves of cylinders.

Cylinders may only be moved on a cylinder trolley. The reduction valve must be taken off before moving. Cylinders may not be manhandled upstairs.

Empty cylinders should be so marked and placed in the locked cylinder store in the car park (key for store kept in Electronics Workshop). When in doubt consult the School Safety Officer

SECURITY

All staff and students issued with keys to the School must keep them in their possession, and must report their loss to the Departmental Superintendent immediately. Do not lend your keys to anyone.

When working out of hours, ensure that doors are kept locked and that all windows and fire doors are closed when you leave at night.

All persons working after 6pm ***MUST*** sign-in. and sign out.

APPENDIX C

EMERGENCY TELEPHONE NUMBERS AND FIRST AID ASSISTANCE

Fire Service (give location of fire)	X333
Medical Help in case of accidents	X333
Hospital: During working hours (0900 – 1700) ask Operator to dial Bangor 384384 or at other Times phone Porter’s Office (2795) and ask them to call the hospital.	
First Aid (Departmental 09:00-17:00)	2727, 3098,2690
College Student Health Centre	2575
College Safety Officer	2779
School Safety Officer	2726
Departmental Superintendent	2726

OUTSIDE WORKING HOURS

Porter’s Office, Main Arts	2795
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APPENDIX D

INDIVIDUAL ACTION IN THE EVENT OF FIRE

MAKE SURE YOU KNOW THE LOCATION OF THE FIRE FIGHTING EQUIPMENT NEAREST TO YOUR ROOM

ALL MEMBERS OF THE SCHOOL ARE ASKED TO ENSURE THAT FIRE DOORS ARE KEPT CLOSED

IF YOU DISCOVER A FIRE

Raise the alarm immediately by shouting FIRE!

Arouse occupants in rooms on either side of yours by banging on the doors and shouting FIRE!

Operate the nearest fire gong or fire bell.
Dial 333 (any telephone) to call fire services – give location of fire.

Use nearest extinguisher or fire blanket – see appliance instructions.

If the fire gets out of control or if your escape is threatened, leave the building **at once**.

Close all doors behind you.

IF YOU HEAR THE ALARM

Close all doors.

Switch off all gas and electrical appliances, **BUT LEAVE LIGHTS ON**.

Close all windows. Evacuate buildings quickly and calmly – **do not run**.

If caught in a smoke filled area, crawl on hands and knees.

If you suspect there is a fire on the other side of the door, open it **very slowly** keeping your foot against it and shielding yourself as much as possible.

GO TO ASSEMBLY AREA – CAR PARK AT FRONT OF BUILDINGS

**KEEP THE FRONT STEPS CLEAR FOR THE EMERGENCY SERVICES.
PLEASE DO NOT BLOCK THE MAIN ENTRANCE.**

APPENDIX E

ACTION IN THE CASE OF ACCIDENTS

Make sure you know the location of the first aid box nearest to your laboratory.

A. VERY SERIOUS INJURY

ACT QUICKLY

If there is continuing danger from the cause of the accident, eliminate it or remove the casualty from danger.

Move casualty as little as possible.

If the casualty is **conscious**, speak to him to get information on cause (especially if a poison) and continuing dangers. Stop any bleeding by applying direct pressure over the wound with the hands or clean pad.

If the casualty is **unconscious**, check that he is breathing easily with mouth and airways unobstructed. Hold the chin forward (head back) place casualty in the recovery position and then check bleeding (above).

If the casualty is **not breathing** check that the airway is unobstructed, push chin forward (head back) and start **mouth-to-mouth artificial respiration** immediately. If the colour does not improve and the pulse is absent, start cardiac massage.

Summon help as soon as possible – **DIAL 333** on any internal telephone and ask for medical help. Out of hours, phone Porter's Office (2795)

B. MINOR INJURIES

Treat from First Aid boxes and if necessary, refer to appropriate BDH chart on "FIRST AID or "SPILLAGE OR HAZARDOUS CHEMICALS".

If necessary obtain first aid assistance from one of the people who have had first aid training and whose names are posted near to each first aid box.

If further treatment is necessary, arrange to go by car to the Casualty Department, Ysbyty Gwynedd (Hospital) Bangor.

EYES affected by fumes or chemical splash must be irrigated by continually immersing the face in cold clean water. This must be continued for 20 minutes, or until skilled advice is available. Remove contact lenses as soon as possible.

SKIN affected by irritants should be washed thoroughly after removing contaminated clothing.

C. ACCIDENT REPORTS

Every accident (or incident which could have led to an accident), however minor, must be reported to the School Safety Officer or deputy and must be recorded on the standard College accident forms and forwarded to the College Safety Officer.

APPENDIX F

CODE OF PRACTICE FOR UNDERGRADUATE TEACHING LABORATORIES AND PRACTICAL CLASSES

A. GENERAL LABORATORY PRACTICE

NO FOOD OR DRINK IS TO BE TAKEN INTO OR CONSUMED IN ANY LABORATORY AT ANY TIME.

SMOKING IS NOT ALLOWED IN THE SCHOOL.

PROTECTIVE GOGGLES AND GLOVES MUST BE WORN WHEN APPROPRIATE.

All students are expected to help maintain a general level of tidiness in the School, particularly in the laboratories, and also in the public library, common room, lecture room and corridors.

Coats and non-essential baggage should be left outside the laboratory.

Handle all equipment with care and common sense. If in doubt about the operation of, or use of, a piece of equipment, ask for help from a demonstrator or technician.

Visitors are not allowed in the laboratories when practicals are in progress.

Students are not normally allowed in the laboratories outside working hours, which are 9.00 to 17.30, without permission from a member of the academic staff. The one exception is the CAL computer room (Library). Access to this room is currently 24 hours, via the main fire exit at the back of the student common room (library I. D card required).

APPENDIX G

CODE OF PRACTICE FOR SUPERVISION OF STUDENTS IN LABORATORIES

Students undertaking individual projects or team projects in their later years of study are often placed in research laboratories. In this case, the academic supervisor will perform a risk assessment on the individual project before any practical work is undertaken.

The project will be assessed for compliance with existing departmental procedures, for general risks to health and safety and for compliance with the university's local rules.

Any precautions, which are necessary, will be agreed between the supervisor and student. The risk assessment is performed using a simple form. As part of his / her training the student will be required to participate in the risk assessment process.

The supervisor will check that the agreed procedures are being followed.

Students must not alter documented methods without the supervisor's knowledge.

The student has a legal responsibility not to endanger themselves or others by their actions.

APPENDIX H

CODE OF PRACTICE FOR CHILDREN WITHIN THE INFORMATICS BUILDING

It is the policy of the School of Informatics that children are only permitted within the Informatics building in-line with the following local rules.

Please Note: this building has not being designed to accommodate children nor does the activity of the Department lend itself easily to providing an entirely safe environment for children. The school cannot therefore guarantee the safety of children who enter the building.

The Local Rules stipulated below are produced in order to seek to control children within the Department and to minimize the dangers to them whilst on University property. Accompanying adults must accept responsibility for any mishaps, which may become such children.

- The School reserves the right to refuse entry to children who have no acceptable reason for entering the building
- All children entering the building must be supervised by a responsible adult at all times.
- Children attending approved courses within the school may enter designated teaching areas as required. In these cases the above supervision requirement may, at the discretion of the Head of School be relaxed. Such children are not permitted to access any other non public areas of the school without adequate supervision
- Children are not permitted within any chemical or biological storeroom or area.
- Children must be adequately supervised at all times and must never be left unattended.
- Children may not operate any item of machinery or equipment.
- Supervision ratios for children must be at least 3:1
- No children are permitted to access this building outside normal working hours except as specifically approved by the Head of Department following a suitable assessment of the risk.

For the purpose of this procedure children are defined as persons under the age of 16.

APPENDIX I

CODE OF PRACTICE FOR CLEANROOM USERS

The cleanroom manager (appendix A)is to be consulted at all times before the commencement of any work.

- 1) There is a cleanroom website which can be accessed via the Informatics “Intranet” web page. On it can be found important documents which can be downloaded such as the cleanroom policy, S.O.P forms (standard operating process/ procedure), chemical list, etc.
- 2) C.O.S.H.H. assessment forms must be filled in for every substance, chemical or solvent used. This must be done by the user of the material, who keeps the original form and a copy is handed to the department safety officer (appendix A)
- 3) First time users of the equipment in the cleanroom must be trained by an experienced user and an S.O.P. form filled in and submitted one week before the process is planned to be carried out. The S.O.P .form is an explicit document which details all the hazards of an experiment not just those associated with the chemicals and materials mentioned in the C.O.S.H.H form.
- 4) **Safety goggles** must be worn.
- 5) **Safety gloves** of the correct chemical resistance must be worn. (Details on cleanroom website.).

APPENDIX J

CODE OF PRACTICE FOR THE MECHANICAL WORKSHOP

- 1) All work within the Mechanical Workshop shall be carried out by suitably qualified, authorized and experienced staff. In general this means only those employed as Mechanical Workshop Technicians. All other individuals wanting to use any of the machines must have received sufficient training and be able to satisfy a Mechanical Workshop Technician and the School Safety Officer of their competence.
- 2) No undergraduate students are allowed to use any of the machines in the Mechanical Workshop.
- 3) Suitable protective equipment (P.P.E.) must be worn at all times i.e. overalls/durable clothing, protective footwear. Eye protection must always be worn in the machine area of the workshop by all staff and visitors as clearly indicated on the relevant signs.
- 4) Lone working on lathes etc is generally not permitted because of the danger of an entanglement going undetected resulting in a serious accident. Lone working should be confined to low risk work such as assembly etc.

APPENDIX K

CODE OF PRACTICE FOR THE INJECTION MOULDER

- 1) Only those people trained on the Injection Moulder are to use it.
- 2) COSHH forms for the material being injected should be completed.
- 3) Because of the isolated location of the unit no one should use the Injection Moulder without informing someone like the workshop or the Safety Officer and for the same reason, during operation the room doors should be kept open so that any accident can be seen. The doors should be kept locked when the machine is not being used.
- 4) The Injection Moulder should not be used at weekends or outside normal working hours 9am – 6pm.
- 5) During normal operation the Injection Moulder's own safety systems are adequate but during research operations the hot surfaces can sometimes be exposed, so the protective gloves (situated in the room) should be used.

APPENDIX L

CODE OF PRACTICE FOR LASER EQUIPMENT / INSTALLATIONS

The details of all lasers of class 3 and above must be kept on the Schools laser register. All laser installations must have a set of local safety rules prominently and permanently displayed by the installation / equipment

Every laser installation in the School requires the following procedure to be carried out before authorisation can be given for any work to commence.

- 1) The intended laser installation is identified to the Laser Protection Supervisor (L.P.S.) (appendix A) or School Safety Officer by the Supervisor involved in the work
- 2) A Risk Assessment is carried out for the intended installation by the user in conjunction with the L.P.S. or the School Safety Officer.
- 3) Any safety aspect / controls identified by the L.P.S. must be put in place and be checked before any work can commence.
- 4) It is a requirement that any users of the new / old installation must also be Registered / Authorised Laser Users and have signed a "Laser Users Registration Form".
- 5) Laser warning signs clearly indicating the hazard and the laser classification must always be in place near the installation and also on any room doors.

APPENDIX M

CODE OF PRACTICE FOR DISPLAY SCREEN USERS

1) The department is obliged to comply with and adopt the Universities Policy on working with Display Screen Equipment as set out in the Policy Notice O.H.S.U P3 (Revised 2004) issued by the Occupational Health and Safety Unit (O.H.S.U)

2) Definitions

(a) “Display Screen Equipment” (D.S.E) – any alphanumeric or graphic display screen.

(b) “User” – means an employee who habitually uses D.S.E equipment in conjunction with his / her normal work for periods in excess of 5 hours a week or more than 1 hour / working day

(c) “Workstations”. The workstation is defined as the screen, keyboard, optional accessories, disk drives, telephone, modem, printer, document holder, work chair, work desk, work surface etc.

3)

(a) All “Users” must attend a training session run by the O.S.H.U.

(b) Following training “users” may complete the self assessments (Risk / Workstation Checklist) for their own workstation and these may then be reviewed and assessed by a nominated School / Departmental D.S.E Risk Assessor.

(c) All “Users” (following training) and on request are entitled to a free eyesight test and a contribution towards the cost of basic corrective appliances.

4) Students (unless they are employed by the Department) are not “Users” but their “Workstations” must be to the same standard as those provided for employees of the University.

5) All workstations provided by the Department (for use by staff and or students) must meet the minimum requirements for workstations.

APPENDIX N: SAFETY GUIDANCE NOTES FOR IDB Ltd.

Introduction

IDB Ltd. is wholly owned by the University of Wales, Bangor. As such, its activities are governed by UWB's General Health and Safety Policy, and General Health and Safety Handbook.

IDB Ltd. is located within the School of Informatics, with whom it shares many facilities and equipment. The School's Safety Policy (this document) therefore applies to IDB also, subject to the notes contained within this Appendix.

IDB operates a 'no-blame' culture. In addition to obligatory accident reporting, all members of staff are strongly encouraged to raise any health or safety concerns with the appropriate person (see below). Our goal is to achieve a safe and comfortable working environment.

Definition of Roles

This section defines the roles of key personnel with respect to safety.

School Safety Officer

- responsible for those premises, facilities, equipment and working practices which are common to both the School and IDB
- provides advice to IDB's Safety Representative on matters concerning safety

IDB's Managing Director

- overall responsibility for safety within the company
- ensures that resources are made available (including training where necessary) in order to ensure that a safety management system is implemented and maintained within the company
- for each job, assigns a Project Engineer and decides (in consultation with Project Engineer) whether a specific Risk Assessment is required

IDB Safety Co-ordinator

- liaises with School of Informatics Safety Officer on matters relating to safety
- establishes and maintains such safety management systems as are required within the company
- oversees that Risk Assessments on non job-specific matters are carried out
- advises Project Engineers on the preparation of job-specific Risk Assessments

IDB Workshop Safety Supervisor

- ensures that Risk Control Strategies and workplace precautions are implemented and maintained
- carries out Risk Assessments on non job-specific matters as required
- ensures compliance with COSHH and any other relevant regulations within the workplace

IDB Project Engineer

- carries out Risk Assessment for job if required, including consideration of COSHH and/or other relevant regulations
- liaises with IDB Safety Representative to implement any necessary Risk Control Strategy / workspace precautions identified during Risk Assessment
- ensures that all staff involved on a job are fully aware of any special safety precautions necessary

Contact Details

IDB Safety Co-ordinator

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IDB Workshop Safety Supervisor

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Safety Guidance

General

All access paths and corridors shall be kept clear at all times.

All workspaces shall be kept as clear as practical, and cleared after use.

Working on the Roof

There must be a minimum of two persons for any visit to the roof area.

In particular, caution shall be exercised if operating on the roof of the exchange building due to the risk of a fall.

The roof area access door shall be locked after completion of the visit.

The safety guidance provided in Appendices B - L of the School of Informatics Safety policy applies also to IDB's activities, subject to the following notes:

Appendix B,

Section A 'General Laboratory Practice'

The scope of the term 'student' shall be extended to include company staff.

The role of 'supervisor' is normally fulfilled by a Project Engineer.

Appendix B,

Section C 'Electricity',

Section H 'Potentially Hazardous Techniques & Equipment'

Situations will occur when it will be necessary to work on equipment containing exposed high voltages.

Such work shall be carried in accordance with appropriate HSE guidelines, e.g.:
'Safety in electrical testing at work – general guidance' INDG354 C400
'Safety in electrical testing: Products on production lines' EIS38 C150

Such work shall only be carried out by suitably qualified and experienced staff.

Such work shall not be carried out unless there is at least one other person in the same room or within reasonable proximity.

EHT work shall **only** be carried out within designated areas of the workshop. No EHT working is permitted within offices.

Working with mains voltages within offices is discouraged.

High voltage notices/warning signs shall be used to clearly highlight the hazard. Particular attention must be paid to the use of warning notices, barriers etc if the equipment is to be left unattended while switched on.

When the work is completed, equipment shall be disconnected and all warning signs removed.

All staff shall be aware of the emergency procedures to be followed in the event of electric shock. Details of such procedures shall also be prominently displayed in the workplace.

Electronic and Mechanical Workshops

See also Appendix J

Work within IDB's electronic and mechanical workshops shall only be carried out by suitably qualified, authorised and experienced staff, or by trainee operators under the direct supervision of experienced staff.

All workshop staff shall be fully aware of those risks associated with normal workshop activity, and of existing Risk Control Strategies.

Any risks not covered by the Safety Policy or existing Risk Control Strategies shall be brought to the attention of IDB's Workshop Safety Supervisor immediately.

Dr. Gwyn Roberts
07-10-200

APPENDIX P:

CODE OF PRACTICE FOR WOMEN OF CHILDBEARING AGE

1) Under the Health and Safety at Work Regulations 1999 the School/University is required to take into account risks to new and expectant mothers whilst carrying out a work related risk assessment. Working conditions, normally considered to be acceptable may constitute a hazard to a new or expectant mother and since pregnancy can often go undetected for the first few weeks after conception the risk assessment for a woman of childbearing age must take into consideration the following factors:

- (a) Continuous Sitting
- (b) Continuous Standing
- (c) Manual Handling
- (d) Shocks or Vibration
- (e) Chemical or Biological Agents
- (f) Ionizing Radiation
- (g) Stress

2) If a woman becomes pregnant then she should notify the School/University in writing, and as soon as she does this then another risk assessment must be made to see if her present working arrangements/conditions are suitable for a new and expectant mother. If the conditions are not suitable then the School/University is obliged to make changes to her working conditions or offer her suitable alternative work.