

School of Chemical & Pharmaceutical Sciences

SAFETY STATEMENT

2014



Version	Date	Name
1.0	28.04.14	Declan McCormack

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SCHOOL OF CHEMICAL & PHARMACEUTICAL SCIENCES CONTACT DETAILS

Role	Name	Location	Email	Telephone
Head of School	Prof. Declan McCormack	KE 340	Declan.Mccormack@dit.ie	01 402 4778
Assistant Head of School	Dr. Barry Foley	Room 342	Barry.Foley@dit.ie	01 402 4645
Assistant Head of School	Prof. John Cassidy	KE 343	John.Cassidy@dit.ie	01 402 4779
School Secretary	Ms. Goretti Murphy	KE 339	Goretti.Murphy@dit.ie	01 402 4572
Nominees to Health & Safety Team	Prof. John Cassidy	KE 340	John.Cassidy@dit.ie	01 402 4779
School Occupational First-aiders	Grant Morton	KE G-41	Grant.Morton@dit.ie	01 402 4608
	Caoimhe Ní Neill	KE 305/314	Caoimhe.Nineill@dit.ie	01 402 4572
	Please note all lecturing staff who work in laboratories are trained in Emergency First-aid			

Please see [School Contacts](#) for full listing




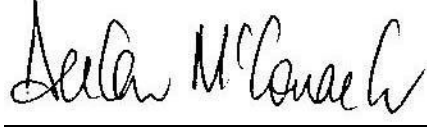
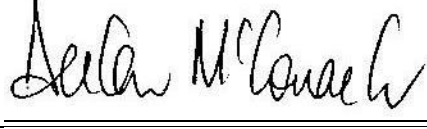

EMERGENCY CONTACT NUMBERS

Emergency Services	112/999 (You may need to dial “0” for an outside line)
Hospital	01 410 3000 St. James Switchboard
Dublin City Council	01 222 22 22
Garda Síochána, Kevin Street	01 666 9400
Bord Gais 24 hour emergency line	1850 20 50 50
ESB 24 hour emergency line	1850 372 999
Health and Safety Authority	1890 289 389
Samaritans	1850 60 90 90
Environmental Protection Agency	1890 33 55 99

COLLEGE & CAMPUS CONTACT DETAILS

Front Desk/Reception	Kevin St. Main building	01 402 4625
	Annexe	01 402 4612
	FOCAS	01 402 7900 / 01 402 7902 / 01 402 7903
Incident Controller	Porter on Duty	01 402 4625
Building Service Supervisor	Jimmy Kane	01 402 4797
Building Maintenance Manager	Colm Gillen	01 402 4646 / 087 2888 294
Occupational Health Officer	Yvonne McArdle	01 402 4127 / 087 9809 135
Health and Safety Officer	Edel Niland	01 402 4192 / 086 3891 080
Student Health Centre	Reception	01 402 3051
Chaplain	Fionnuala Walsh	01 402 4568 / 086 8754 422
Employee Assistance Programme (EAP) Contact	VHI Corporate Solutions	Freephone 1800 995 955 (24 hours / 7 days a week / 365 days a year)
Student Counsellors	Nita Whelan / John Broderick	01 402 3052 / 01 402 3155
Staff Safety Representative	Patricia Ennis	01 402 4780

LIST OF PERSONS IDENTIFIED AS BEING RESPONSIBLE FOR HEALTH AND SAFETY TASKS

TASKS	RESPONSIBLE PERSON	SIGNATURE
Coordinating and ensuring records are maintained for training and provision of Personal Protective Equipment	Prof. Declan McCormack	
Ensuring Safety Statement, risk assessments are carried out, updated and communicated	Prof. Declan McCormack	
Ensuring the upkeep of first-aid box and ordering first-aid supplies from Occupational Health Officer	Prof. Declan McCormack	
Co-ordinating contractors activities and dealing with Buildings Office for Work Permits	Prof. Declan McCormack	
Updating the statutory registers and Safety Data Sheets	Prof. Declan McCormack	
Ensuring adequate personnel designated as evacuation marshals and first-aiders	Prof. Declan McCormack	

INTRODUCTION

Dublin Institute of Technology (DIT) is required under the provisions of the *Safety, Health and Welfare at Work Act 2005*, to have and bring to the attention of all employees, a statement of its policy, organisation and arrangements with respect to health, safety and welfare at work. The Act also embraces all of the activities at DIT and staff, students, visitors, contractors/service providers.

The fundamental aim of the *Safety, Health and Welfare at Work Act* is the prevention of accidents and illnesses at the place of work. Safety consultation procedures and the preparation of a Safety Statement and written risk assessment are the key provisions of the Act.

This Safety Statement has been prepared in compliance with the Act and provides details of the specific hazards relevant to the School of Chemical & Pharmaceutical Sciences and the controls that have been implemented to adequately safeguard the activities.

This Safety Statement should be read in conjunction with the DIT Framework Safety Statement, which is available on the [health and safety website](#).

This document applies to all staff, students, visitors, contractors/service providers and campus users. It will be updated as necessary in the light of new legislation, staff feedback, changes and practical experience. In addition, it will be reviewed annually.

SAFETY POLICY & OBJECTIVE FOR THE SCHOOL OF CHEMICAL & PHARMACEUTICAL SCIENCES

The School of Chemical & Pharmaceutical Sciences will ensure that:

- Work activities are managed and conducted in a manner that ensures the safety, health and welfare of our employees, students, visitors and contractors/service providers
- Our Safety Statement is maintained and updated and written risk assessments are carried out and reviewed as required and brought to the attention of all employees at least annually
- Identified protective and preventative measures are implemented and maintained
- Improper conduct likely to put an employee, student, visitor or contractor/service provider's safety and health at risk is prevented
- A safe place of work is provided that is adequately designed and maintained
- A safe means of access and egress is provided
- Safe plant and equipment are provided
- Safe systems of work are provided
- Risks to health from any article or substance are minimised
- Appropriate information, instruction, training and supervision are provided
- Where hazards cannot be eliminated suitable protective clothing and equipment are provided
- Emergency plans are prepared and revised
- Welfare facilities are provided and adequately maintained
- Competent personnel who can advise and assist in securing the safety, health and welfare of employees are employed when required

Signed: _____



Head of School of Chemical & Pharmaceutical Sciences, Prof. Declan McCormack

Date: 12th May 2014

SCOPE OF SAFETY STATEMENT & HISTORY OF LOCATION

The School of Chemical and Pharmaceutical Sciences has 35 staff members:

- 22 academic staff members
 - 1 Senior Lecturer III
 - 2 Senior Lecturer II
 - 2 Senior Lecturer I
 - 18 lecturers (of which 2 are part-time)

The work of the School is supported by:

- Technical staff members:
 - 8 Technicians
 - 3 Laboratory Aides
 - 1 Administrator (full-time)

Normally the School also engages up to 20 part-time academic staff, some of whom are postgraduate students on higher degree programmes such as MPhil/PhD programmes by research, and others are industry experienced professionals, who lecture on the MSc programmes and in the forensic area. Staff members from the School work throughout the DIT campuses and on occasion off-site within other academic institutions and companies.

There is a long tradition of research in the School of Chemical and Pharmaceutical Sciences. Collaborative projects with industry, state scientific bodies, research organisations and other universities are an important part of the School's research activities. The research topics cover many aspects of modern chemistry, organic, inorganic, physical, pharmaceutical and analytical and range from fundamental, curiosity-driven exploration to applied and industrially motivated research. Associated with the School of Chemical and Pharmaceutical Sciences is the FOCAS Institute. The School has many active areas of research. Laboratories are based both on the DIT Kevin Street site and in the FOCAS Institute.

The School is managed by the Head of School, Prof. Declan McCormack, who is supported in his management function by two Assistant Heads of School, Dr. Barry Foley and Prof. John Cassidy. Prof. John Cassidy has been assigned specific duties in relation to the management of health and safety within the School.

The programmes offered comprise of ordinary degree, honours degree, taught postgraduate programmes and short training courses in all areas of Chemistry and Pharmaceutical Sciences. Opportunities to pursue higher degrees through research are also offered by the School.

The programmes for which the School has responsibility are as follows:

Undergraduate Programmes currently offered by the School:

Honours Degree Programmes:

DT203T	Forensic and Environmental Chemistry
DT299T	Chemical Sciences with Medicinal Chemistry
DT227	Science with Nanotechnology (Shared with Physics)
DT201	Science

Ordinary Degree Programmes:

DT261	Medicinal Chemistry and Pharmaceutical Science
DT201A	Validation of Medicinal Products

DT212

Science

Taught Postgraduate Programmes offered by the School of Chemical and Pharmaceutical Sciences

DT233/DT237

MSc in Pharmaceutical Quality Assurance

DT276

MSc in Pharmaceutical Validation Technology

School Safety Committee

The School of Chemical & Pharmaceutical Sciences has a School Safety Committee, which is composed of academic and technical staff members and a research student member, who represent the interests of each section of the School. The Head of School is an ex-officio member of the Committee. The committee meets regularly (approximately twice per semester) and helps in the organisation of safety in the School. The safety committee will also facilitate the consultation process.

Dr. Patricia Ennis acts as chair of the Safety Committee, and Prof. John Cassidy acts as chair in her absence. The Safety Committee facilitates coordination of health and safety activities and assesses health and safety requirements in consultation with the Head of School, Prof. Declan McCormack and the Assistant Head Prof. John Cassidy. The Safety Committee has the following main functions:

- To co-ordinate and prioritise for action, in consultation with the Head of School, any safety, health and welfare issues raised by safety inspections or individual staff members
- To facilitate the compilation of the safety statement for the School and its regular review
- To facilitate the production and review of risk assessments relating to hazards within the school
- To facilitate the review of all systems of work regularly from a safety, health and welfare point of view, including the provision of Personal Protective Equipment (PPE) where appropriate
- To identify the safety equipment required and advise the Head of School/Assistant Head on purchase: e.g. type, signage, etc.
- To monitor safety, health and welfare training needs and to advise the Head of School/Assistant Head accordingly
- To monitor day to day implementation of the safety and health policy within the School
- To facilitate the investigation and review of accidents / incidents occurring within the School
- To assist the Health and Safety Officer with regular safety inspections
- To promote in conjunction with the Management of the School and other staff a safety culture within their areas of responsibility
- To liaise with the College of Sciences Health & Safety Team

SAFETY RESPONSIBILITIES

In accordance with the DIT Framework Safety Statement, the Head of the School of Chemical & Pharmaceutical Sciences, Prof. Declan McCormack, as part of his management function, is responsible for ensuring, so far as is reasonably practicable, the health and safety of persons working, studying or visiting his area of responsibility. In particular he is responsible for the following:

1. To ensure a Safety Statement relevant to operations is prepared which complies with Section 20 of the Safety, Health and Welfare at Work Act
2. To ensure that the Safety Statement is reviewed at least annually and that the DIT Senior Leadership Team (SLT) Health and Safety Sub-committee is notified that the review has been completed and is provided with any updated document which may result from such a review
3. To ensure that all hazards are identified and risks controlled
4. To ensure that regular safety inspections/audits are carried out to monitor compliance with the Safety Statement and legal requirements and to ensure appropriate follow-up action is taken
5. To investigate all accidents to staff/students/visitors in their area of responsibility and to complete the Incident Report Form as appropriate
6. To ensure that local emergency plans and first-aid procedures are implemented and that sufficient evacuation marshals/first-aid personnel are available
7. To ensure that staff are appropriately trained to carry out their duties safely and to ensure the attendance of staff at designated training courses as appropriate
8. To ensure that all contractors/service providers carrying out work in the area operate under the Buildings Office 'Permit to Work' system
9. Based on risk assessment, to arrange for the provision of adequate and appropriate personal protective equipment for employees

All Institute Staff

All employees/staff have a duty to take responsibility for their own safety, health & welfare and for that of visitors and any other person who may be affected by their acts or omissions while at work.

Statutory Requirement

Chapter 2, Sections 13 & 14 of the Safety Health and Welfare at Work Act 2005 places a number of obligations on employees whilst at work as outlined in this section:

13.—(1) An employee shall, while at work—

- (a) comply with the relevant statutory provisions, as appropriate, and take reasonable care to protect his or her safety, health and welfare and the safety, health and welfare of any other person who may be affected by the employee's acts or omissions at work,
- (b) ensure that he or she is not under the influence of an intoxicant to the extent that he or she is in such a state as to endanger his or her own safety, health or welfare at work or that of any other person,
- (c) if reasonably required by his or her employer, submit to any appropriate, reasonable and proportionate tests for intoxicants by, or under the supervision of, a registered medical practitioner who is a competent person, as may be prescribed,
- (d) co-operate with his or her employer or any other person so far as is necessary to enable his or her employer or the other person to comply with the relevant statutory provisions, as appropriate,
- (e) not engage in improper conduct or other behaviour that is likely to endanger his or her own safety, health and welfare at work or that of any other person,
- (f) attend such training and, as appropriate, undergo such assessment as may reasonably be required by his or her employer or as may be prescribed relating to safety, health and welfare at work or relating to the work carried out by the employee,

(g) having regard to his or her training and the instructions given by his or her employer, make correct use of any article or substance provided for use by the employee at work or for the protection of his or her safety, health and welfare at work, including protective clothing or equipment,

(h) report to his or her employer or to any other appropriate person, as soon as practicable—

(i) any work being carried on, or likely to be carried on, in a manner which may endanger the safety, health or welfare at work of the employee or that of any other person,

(ii) any defect in the place of work, the systems of work, any article or substance which might endanger the safety, health or welfare at work of the employee or that of any other person, or

(iii) any contravention of the relevant statutory provisions which may endanger the safety, health and welfare at work of the employee or that of any other person, of which he or she is aware.

(2) An employee shall not, on entering into a contract of employment, misrepresent himself or herself to an employer with regard to the level of training as may be prescribed under *subsection (1)(f)*.

14.—A person shall not intentionally, recklessly or without reasonable cause—

(a) interfere with, misuse or damage anything provided under the relevant statutory provisions or otherwise for securing the safety, health and welfare of persons at work, or

(b) place at risk the safety, health or welfare of persons in connection with work activities

In addition, staff have the following responsibilities:

- To participate in and put into practice all training provided by DIT, to ensure compliance with safety, health & welfare legislation
- To co-operate with those responsible for health and safety
- To familiarise themselves with the contents of the Health and Safety Statement, safety policies and procedures and Codes of Practice
- To assist in the preparation and updating of the School of Chemical & Pharmaceutical Sciences Safety Statements
- To assist and co-operate with periodic safety inspections/audits
- To assist in the completion of standard hazard identification control sheets and co-operate with the reporting and investigation of incidents
- To ensure that equipment is operated in a safe manner and good housekeeping standards are maintained at all times
- To promote safe work practices
- To ensure that all safety rules are communicated to students, contractors and visitors, other campus users
- To use equipment only if authorised and trained
- To ensure that any safety measures associated with new equipment/machinery is brought to the attention of the Head of School of Chemical & Pharmaceutical Sciences, Prof. Declan McCormack, implemented, documented in the Health and Safety Statement and communicated effectively
- To ensure that they do not carry out repairs or servicing on plant/equipment/machinery unless they are trained to do so, it is isolated and they should ensure that any guards removed to carry out repairs are properly replaced
- To wear appropriate personal protective equipment where required
- To report to the Head of School of Chemical & Pharmaceutical Sciences, Prof. Declan McCormack any person abusing facilities or equipment
- To select and appoint a Safety Representative
- To notify the Health & Safety Officer of any perceived shortcomings in the safety arrangements

- To comply with policies and procedures from the Buildings Office e.g. in relation to use of domestic appliances

Undergraduate/Postgraduate Students

Students have a legal responsibility not to endanger themselves or others by their acts or omissions. Thus they must:

- Take reasonable care of their own safety and the safety of others
- Co-operate fully with all safety rules and regulations issued by DIT e.g. smoking etc.
- Co-operate with those with responsibility for health and safety
- Not interfere or misuse any specified items of safety equipment or any safety device
- Ensure that equipment is operated in a safe manner and good housekeeping standards are maintained
- Use personal protective equipment (PPE) as necessary. (Students are required to provide their own PPE – laboratory coat, safety glasses etc.)
- Not access or use laboratory/workshop facilities and equipment without the permission of their academic supervisor and where necessary the staff member in charge of these facilities
- Use equipment only if authorised and properly trained
- Report any incident, dangerous occurrence, defective equipment or potential safety hazard to the Head of School of Chemical & Pharmaceutical Sciences, Prof. Declan McCormack
- To participate in any safety training programmes facilitated by the Health & Safety Office
- Only undertake work in laboratories that has been risk assessed in conjunction with their supervisor and signed off

Contractors/Service Providers

The following responsibilities are allocated to contractors/service providers:

- All contractors/service providers will be expected to comply with the Institute's Policy for safety health and welfare and must ensure that their own Safety Statement is made available whilst work is being carried out. It is the Institutes policy that all contractor/service providers have a Safety Statement in accordance with the *Safety, Health and Welfare at Work Act 2005*
- All work must be carried out in accordance with relevant statutory provisions and taking into account the safety of others on the site. The contractor/service provider must have adequate insurance cover
- Contractors/service providers must not commence with any work on the premises or project site until the Contractor Safety Guidelines and other relevant safety procedures are read, understood and accepted (available from Buildings Office). They must complete the e-learning programme for contractors/service providers
- Contractors/service providers will take reasonable care of themselves and others who may be affected by their acts or omissions and will co-operate as appropriate with DIT employees as necessary
- Contractors/service providers must supply at tender stage a Safety Statement, relevant method statements, copies of their public and employers liability insurance and complete the Contractors Compliance Form CCF1 before a contract is awarded
- They will liaise with the local Building Maintenance Manager and obtain work permits as required
- Scaffolding and other access equipment used by contractor's/service provider's employees must be erected and maintained in accordance with current legislation and Codes of Practice

- All plant and equipment brought onto the site by contractors/service providers must be safe and in good working order, fitted with any necessary guards and safety devices and have all necessary certificates available for inspection
- All transformers, generators, extension leads, plugs and sockets must be suitable for industrial use and in good condition. No power tools or electrical equipment of greater than 110 volts should be used outdoors. If it is necessary to use equipment operating from a 220-volt supply, a residual current device with a rated tripping current of 30mA and operation of 30m sec must be used
- Any injury sustained by a contractor's/service provider's employee must be reported immediately to the local Building Maintenance Manager
- Contractors/service providers must comply with any safety instructions given by DIT
- DIT may carry out safety inspections. Contractors/service providers informed of any hazards or defects identified during these inspections will be expected to take immediate action
- DIT must be notified of any material or substance brought onto the site which has health, fire or explosive risks. Such materials must be stored and used in accordance with current recommendations
- Contractors/service providers will be accountable for the maintenance of good housekeeping practices at all times within their respective areas of work
- Contractors/service providers are not allowed to use equipment owned by the Institute unless written permission is received from the Head of School and a competent person passes it as being safe
- Contractors/service providers must wear PPE as appropriate/prescribed
- The DIT Buildings Office has developed a Contractors Safety Code. This will be further developed and made specific to the School of Chemical & Pharmaceutical Sciences and given to service engineers by the School

Visitors (a person other than an employee or contractor/service provider)

- Visitors may not be aware of the potential hazards associated with DIT and also may lack familiarity with the Institute's premises/facilities and are therefore a potential risk to themselves and others. All visitors must identify themselves to the relevant DIT personnel and follow all DIT's safety procedures and policies
- Visitors must not enter any area where they do not have the authority to do so. Hazardous areas will be restricted
- They must not interfere with any of the Institutes property, equipment, materials or substances unless they have permission to do so from the person in charge
- They must not remain on the premises any longer than necessary and should return PPE on leaving
- In the event of an evacuation, they will be led to the Assembly Point by their DIT host
- A safety booklet and wallet card is available at Front desk/Reception area and on request
- The DIT Framework Safety Statement is available on the safety website www.dit.ie/safework
- DIT has a [Child Protection Policy](#) available on the DIT website

DISCIPLINARY ACTION

Any member of staff/student who contravenes or fails to manage to work in accordance with current safety health and welfare legislation, the DIT Framework Safety Statement and codes of practice may be subject to the Institute's disciplinary procedures. The Buildings Officer will address any contraventions by contractors/service providers.

HEALTH AND SAFETY CONSULTATION

Employers are obliged under *The Safety, Health and Welfare at Work Act 2005*, to consult with and take account of any representations made by employees regarding health, safety and welfare. The School of Chemical & Pharmaceutical Sciences ensures that health and safety is an agenda item at all meetings and ensures that working groups are appointed to deal with certain health and safety items if required.

A nominee from the School of Chemical & Pharmaceutical Sciences sits on the College of Sciences & Health, Health and Safety Team. This team meets periodically throughout the year, usually every two months.

Consultation takes place when there is a change, update or modification to a particular work process, when new machines or processes are introduced or when new substances or materials are introduced.

The College of Sciences & Health, Health and Safety Team has selected and appointed Safety Representatives. Details of current Safety Representatives may be found on the health and safety website (www.dit.ie/safework)

PROVISION OF INFORMATION

Staff, students and others are made aware of safety matters by the following means:

- Agenda item at Team/School meeting
- Desktop Emergency Response Flip charts
- Health & Safety notice boards
- Health & Safety Newsletters
- Toolbox talks
- Health & Safety Induction
- Health & Safety Training courses
- Signage:
 - Safety notice points
 - Emergency first-aid procedure signs
 - Emergency floor plans
 - Assembly point maps
 - Fire actions notices
- Emergency Response posters
- Safety booklets
- Safety wallet cards
- Website www.dit.ie/safework
- Posters
- Inductions are prepared and delivered by Occupational Health Officers where requested
- School Secretary has an email listing to communicate matters to staff members
- Relevant risk assessments
- School Safety Statement and Safety Manual

HEALTH AND SAFETY RESOURCES

The School of Chemical & Pharmaceutical Sciences codes all budgetary spend on activities/spend pertaining to safety, health and welfare. Considerable resources are expended by the School of Chemical & Pharmaceutical Sciences in securing the health, safety and welfare of employees in terms of personnel, time, materials, equipment and the purchase of goods and services.

Where additional equipment, training etc. is required whether as a result of ongoing risk assessment or legislative change, resources will be allocated on a prioritised basis to meet the identified requirements.

The health and safety website hosts a reference library of videos, texts, literature and other publications on health and safety matters.

SAFE SYSTEMS OF WORK

It is the policy of DIT to ensure that employees are not asked to perform tasks outside their competence and capacity. Safe systems of work have been designed with this objective in mind. As some work activities give rise to risks which can only be controlled by adherence to proper procedures, employees are issued with written safe working procedures which should be adhered to at all times.

Standard Operating Procedures/Safety manuals/Codes of Practice include:

- School of Chemical & Pharmaceutical Sciences Safety Manual
- All laboratory manuals contain hazard identification and risk assessment
- Code of Practice for 'clean-up of a chemical spill
- Code of Practice for the storage and transport of chemicals
- Code of Practice for the handling of cryogenics (liquid nitrogen)
- Method Statement and Risk Assessment for nuclear magnetic resonance (NMR) (Bruker)

Management shall keep a watching brief on safety matters and where necessary adjust or alter systems of work to make them as safe as is reasonably practicable.

PROCUREMENT CONTROL

The purchasing of equipment, plant and substances is subject to the provisions of the *Safety, Health and Welfare at Work Act 2005* and associated regulations, thus all equipment, plant or substances will undergo risk assessment prior to acceptance into the Institute. The School of Chemical & Pharmaceutical Sciences follows all the guidelines as per the Framework Safety Statement and ensures that a risk assessment is carried out before any equipment/machinery or contractor/service provider is engaged by the School of Chemical & Pharmaceutical Sciences. Details of equipment/machinery/tools and associated risk assessment is available in the Physical Hazards section of the risk assessment.

Chemicals:

Before any new chemical (CMR) which is subject to the restrictions of the Safety, Health & Welfare at Work Carcinogen Regulations 2001 is purchased, it must first receive approval from the Head of School. Safety Data Sheets (SDS) and CMR risk assessment for its use must be provided. This information must be attached to the order form. The technician ordering the chemical monitors this process. There is also a responsibility on the individual ordering the chemicals to ensure that no

alternative is available. Sign off procedure needs to be written down and circulated to technical staff as a code of practice.

A DIT wide Purchasing Policy needs to be developed for CMR Categories 1A/1B.

Any employee requiring a new chemical, either for process activity or as a sample, must first obtain an SDS and have available a written risk assessment for use, storage and operation. The technician ordering the chemical monitors this process.

Radioactive chemicals and materials:

Employees are not permitted to bring radioactive materials on site without the prior written authorisation of the Radiation Protection Officer Dr. Jacinta Brown.

Equipment Purchase:

For all new equipment purchased, the purchaser is to ensure that the equipment complies with recognised ergonomic and safety standards. Machinery suppliers shall be requested to supply all relevant information including specifications for machine guarding, maintenance, noise, fumes, dust, special training needs etc. which will assist in the risk assessment process.

INSPECTION PROCEDURES

All locations of work will be periodically inspected by a representative from the Health & Safety Office accompanied by local management and the Safety Representative. The Head of School of Chemical & Pharmaceutical Sciences will ensure non-conformances identified are rectified and a log maintained.

Where in the opinion of the Health & Safety Officer or other competent officer, there is a risk of serious injury and immediate risk to individuals, he/she will have the authority to advise that the activity is stopped until adequate steps have been taken to eliminate risk or if possible reduced to an acceptable level. Where the risk cannot be reduced to an acceptable level and finance is not available, the Head of School of Chemical & Pharmaceutical Sciences shall ensure the activity is ceased.

In accordance with statutory requirements, certain examinations, testing and inspections are carried out on specific items. A list of those items, the frequency of inspection and the testing body is presented below: Fumehood testing is opened to tender regularly

Item	Location	Test Frequency	Test Company Details
Fumehoods	All working laboratories	Annually	Davidson and Hardy
Gas cylinders Gas meters Gas lines	Various	Annually	BOC
Gas delivery system	Ground floor	Annually	MIPS

TRAINING

Health and Safety training is a legal requirement specified by the Safety, Health and Welfare at Work Act, 2005. It is also Institute Policy that all employees attend such health and safety training and assessment. Please see Health and [Safety Training Policy for Staff](#).

Each employee will be made aware of emergency action plans and arrangements pertinent to their workplace as per section 11 of the 2005 Act at induction by completing the online Emergency Response Training (ERT) programme.

In addition to our statutory duty to employees, DIT seeks to provide such training as is necessary to enable the students to undertake their studies in a manner which, in so far as it is reasonably practicable, is safe and does not give rise to risks to health or expose the individual student or other persons to unacceptable levels of risk. The provision and extent of any necessary training is dependent upon the nature of the academic discipline being pursued, the experience and disposition of the students involved, their familiarity with any equipment/substances to be utilised, the environment/conditions where the activities may be discharged, and the extent to which supervision is necessary and available. Risk assessments will highlight where additional student training is required.

Training required for the School of Chemical & Pharmaceutical Sciences includes:

Mandatory Training:

- Emergency Response Training (ERT)
- Manual Handling
- Emergency First-aid for all staff working in laboratories
- Chemical Safety Training
- Health & Safety Responsibilities: Management Responsibilities
- Health & Safety Responsibilities: Management Workshops

Specialist Training:

- Gas Safety (where required)
- Training for Safety Committee Members
- Chemical Risk Assessment Training
- Occupational First-aid Training
- Dangerous Goods Safety Advisor (DGSA) (Private Company: Indaver)

EMERGENCY PLANNING AND RESPONSE

SERIOUS INCIDENT/EMERGENCY

- Dial 112/999 (You may need to dial “0” for an outside line)
- Contact DIT Health & Safety Officer - 086 3891080

REQUIRES FIRST-AID

- Seek School of Chemical & Pharmaceutical Sciences first-aider – see Contacts page.
- Injured unwell staff/students:

Occupational Health Officers

Yvonne McArdle

087 9809135

- Injured/Unwell Students:

Student Health Centres

Southside	01 402 3051
Northside	01 402 3614

If serious/after 5pm/in doubt, go directly to local A & E/local GP

REQUIRES FURTHER ATTENTION

- Staff members should attend their local GP
- Students should attend the Student Health Centre
- Structural safety matters - Should be referred to the local Buildings Maintenance Manager
- Operational safety matters - Should be documented on a Hazard Report Form and sent to the Health & Safety Office (www.dit.ie/safework)

FIRE & EVACUATION
SCHOOL OF CHEMICAL & PHARMACEUTICAL SCIENCES STAFF

INSTRUCTIONS ON DISCOVERING A FIRE (all staff, students, visitors, contractors/service providers etc.)

- Activate the nearest fire alarm point
- Leave the building using the nearest exit route
- Disperse from the building and move away to assembly point
- Do not use the lift
- Do not re-enter the building until the “all clear” has been given

INSTRUCTIONS ON HEARING THE EVACUATION ALARM OR OTHER WARNING (all staff, students, visitors, contractors/service providers, first-aiders etc.)

Objectives:

To outline actions to be taken by the School of Chemical & Pharmaceutical Sciences staff in the event of an Alarm Activation

Duties:

On hearing an alarm activation or other warning:

- Instruct students and staff to leave DIT, Kevin Street (Chemical & Pharmaceutical Sciences are mainly 3rd floor, main building)
- All students in classrooms should be led by lecturers/technicians
- All visitors should be escorted to safety by the person they are visiting
- Anyone in common areas or moving between areas, should immediately join the lines of people exiting
- Shut down equipment if safe to do so and time permits
- Close windows and doors to confine smoke/fire
- “Sweep search” the area specify area (laboratories, offices, classrooms, lecture theatres, sanitary facilities, storage areas etc.), evacuate the building* immediately by the nearest available exit. Marshals should then leave immediately via the nearest escape route
- If required, assist any individuals to evacuate the area
- Form a single file on both sides of the corridor or stairway, leaving the centre passageway clear
- Do not delay or stop to collect personal belongings
- Do not use the lift
- If heavy smoke present, try to find another exit or crouch low to the floor
- All doors should be closed (not locked) by the last person in the line
- Report to your Assembly Points: **Bishop Street Flats (opposite main entrance) and Camden Row**
- All evacuation marshals/sweepers, building maintenance personnel, Heads of School of Chemical & Pharmaceutical Sciences, first-aiders should assemble at the assembly points to check in, reporting to the Incident Controller details of any casualties or people needing assistance with evacuation. This information is then given by the Incident Controller to the Emergency Services
- Confirm to the Incident Controller that the area has been cleared and report details of any casualties or people needing assistance with evacuation to the Incident Controller
- Do not return to the building until instructed to do so by the Incident Controller

* Separate personal emergency egress plans (PEEP) have been prepared for people with disabilities

YOU SHOULD FAMILIARISE YOURSELF WITH THE LOCATIONS OF THE FOLLOWING:

- Escape routes
- Fire alarm call points
- Fire extinguishers and blankets
- Fire assembly points

The Assembly points for DIT, Kevin Street are:

1. **Bishop Street Flats (opposite Main entrance)**
2. **Camden Row**

<p>Bishop Street Flats (opposite main entrance)</p>	
<p>Camden Row</p>	

Your Incident Controller is: **Porter on Duty**

Evacuation Marshals include:

- Prof. Declan McCormack
- Dr. Barry Foley
- Prof. John Cassidy
- Goretti Murphy
- Caoimhe Ní Neill
- Howard Wallace

The School of Chemical & Pharmaceutical Sciences will ensure that sufficient evacuation marshals are appointed on an ongoing basis to provide an effective service.

Your Incident Controller is: **Porter on Duty**

General Rule of Thumb – all staff should act as “sweepers” in the event of an emergency, checking laboratories, offices, classrooms, lecture theatres, sanitary facilities, storage areas etc. as they exit to ensure that as they exit everywhere has been cleared.

YOU SHOULD NOT PUT YOURSELF IN DANGER AT ANY TIME

FIRST-AID

- An emergency first-aid kit and automatic external defibrillator (AED) is available at the front desk/reception area.
- A list of Institute Staff who have completed training in first-aid/AED is available on the [health and safety website](#)

Trained Occupational First-aiders include:

- Grant Morton
- Caoimhe Ní Neill

Note: All academic staff who work in a laboratory are trained in emergency first-aid

First-aid kits are located in:

- Laboratory 327
- Laboratory 330
- Laboratory 331
- Laboratory 333
- Laboratory 310
- Laboratory 312
- Laboratory G-41

Please report any used items to the designated person in charge who is responsible for monitoring the contents and ensuring their replacement.

Further Treatment / Incident Report Forms

- Staff may refer students to the Student Health Centre in DIT, Aungier Street at 01 402 3051 or contact the Emergency Services on 112 / 0999 if an incident is urgent
- Incident Report forms are available from the Front desk/Reception. When completed and signed the top white copy should be sent the DIT Health & Safety Officer
- An Occupational Health Officer (Yvonne McArdle) is available at 087 9809135 weekdays 9:00am – 5:00pm to deal with the occupational health, safety and welfare needs of all staff and students and to provide a back-up first-aid service

INCIDENT REPORTING AND INVESTIGATION

The Institute has a statutory duty to record all incidents and report certain types of incidents and dangerous occurrences to the Health and Safety Authority (HSA). Therefore all incidents resulting in personal injury, damage to property, dangerous occurrences or near miss e.g. must be reported immediately to your Manager/Supervisor.

The incident report form must be forwarded to the Health & Safety Officer within 24 hours of the incident occurring or as soon as possible. Incident report forms are available at the front desk/reception area.

HAZARD REPORTING

DIT recognises the part that its staff/students/visitors and contractors/service providers have to play in the reporting of hazards in the workplace. There is a report form to formally identify and report hazards. If the hazard is a structural issue, it should be reported immediately to the local Building Maintenance Manager and if it is an operational safety issue, it should be reported to local management using the Institute's Hazard Report Form available on the [health and safety website](#).

MANAGEMENT OF CONTRACTORS/SERVICE PROVIDERS

All work undertaken by outside contractors/service providers on behalf of the School of Chemical & Pharmaceutical Sciences must be carried out under a Buildings Office 'Permit to Work'.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

It is the policy of DIT to eliminate all hazards where reasonably practicable. DIT will assess what PPE appropriate to the task/work environment is required only as a last resort when further risk reduction is not feasible.

All PPE and safety equipment purchased by the School of Chemical & Pharmaceutical Sciences must be of approved standards and comply with relevant EC Directives regarding design and manufacture. Defects shall be reported to Managers/Supervisors.

The various areas where PPE must be worn are outlined in the departmental risk assessments. This is further complemented with signage. PPE shall be provided and worn in designated areas and whilst carrying out specific tasks, based on the risk assessments.

All PPE must be appropriate for the risks involved without it leading to increased risk. It should be chosen based on assessment and in consultation with staff members. The PPE should be used only for the purpose specified and where it is necessary to wear simultaneously more than one item of PPE, they must be compatible with each other and continue to be effective against the risks involved. Staff should report immediately when the PPE is faulty or defective or if they have any medical condition that may affect the correct use of the PPE.

PPE should be of a type suitable for the conditions in the workplace and take account of the user's state of health. It is in principle intended for one's personal use only, however if it is necessary for an item of PPE to be worn or used by more than one person, measures should be taken to ensure that it does not create any health or hygiene problems for the users. The supply, issue and record of all PPE is the responsibility of Supervisors. Employees and students must be informed of all risks

they are being protected from, instructed on the use of the PPE and given adequate information, training and demonstration in the wearing of such equipment and the level of protection afforded by its use. Every person provided with PPE must take reasonable care of such equipment and must make proper use of it where there is a foreseeable risk of injury and where they have been instructed to do so. They must also ensure that it is returned to storage subsequent to use. Supervision and monitoring are required to ensure PPE is used/worn.

Staff shall inform any person in the area including contractors/service providers, students and visitors of the statutory and local policies in place with regard to PPE.

PPE for the School includes:

- Laboratory coat
- Safety glasses (including prescription safety glasses)
- Gloves (nitrile unless otherwise specified, (not Latex gloves) are used)

It is the responsibility of individual staff members to select appropriate PPE and supervise students to ensure they wear it. Contaminated PPE should remain in the work area and not be worn into any "clean" areas such as offices or canteen. PPE that is contaminated must be discarded as chemical waste or decontaminated prior to routine laundering.

PPE should be specified within the student laboratory manual where required.

Gloves

The hazards of the materials to be used are evaluated prior to selecting gloves. Nitrile examination gloves, in general, are appropriate for most routine work. Check the chemical risk assessment. These gloves are single-use only; they cannot be washed and reused. Gloves must be checked for holes or tears. Gloves must be selected with the agreement of academic staff.

Respiratory Protection

Respiratory protection may be necessary if aerosol generation cannot be prevented or contained by other means.

Eye and Face Protection

Safety glasses must have side shields. Chemical splash goggles may be necessary if the work involves chemicals. A face shield may be necessary in addition to the safety glasses or goggles if the potential for splashing, spraying, or aerosol generation exists.

Laboratory Clothing

Shorts, sandals, and open-toed shoes should not be worn in the laboratory. Howie-style laboratory coats must be worn, buttoned up, to protect street clothing from potential contamination. Lab coat sleeves should be long enough to enable the wearer to overlap the glove cuffs with the sleeves. Staff coats are laundered by Spring Grove on a weekly basis. Once a lab coat is contaminated the staff member changes it immediately for a clean coat. Students are prohibited to wear lab coats which are defaced. Where head scarves are worn, they must be tight-fitting to the head.

ERGONOMICS

All new equipment and machines, tools, work methods, work procedures and work stations should be assessed for ergonomic hazards prior to being brought into use. The Health & Safety Officer should be informed of the risk assessment process and will advise of competent people to assist with the risk assessment.

Staff should consider ergonomic standards when designing new workstations and layout of new offices.

It is the responsibility of the Head of the School of Chemical & Pharmaceutical Sciences to ensure that all information on ergonomic controls is communicated to employees and students via circulars, team briefings or other means. He should also ensure that all problems identified are addressed and brought to the attention of the Health & Safety Officer.

WELFARE PROVISIONS

In accordance with legislation, Dublin Institute of Technology is committed to providing welfare facilities which are available to all staff which include the following:

- ✓ Adequate and suitable sanitary and washing and drying facilities with hot and cold running water maintained in a clean and hygienic condition
 - ✓ Adequate number of lavatories and washbasins with hot and cold running water
 - ✓ Adequate and suitable showers for employees if required by the nature of the work
 - ✓ An adequate supply of potable drinking water at suitable points conveniently accessible to all employees, tested by the Buildings Office
 - ✓ Suitable facilities for sitting/other ergonomic support, in the case where work can be done in a seated position
 - ✓ Suitable and adequate facilities for boiling water and taking meals or reasonable access to other suitable and adequate facilities are available in the main canteen (Annexe), the staffroom (4th floor, main building) or in the small staffroom (2nd floor) when the canteen/staffroom are closed
 - ✓ Easily accessible rest rooms/areas with seats with backs
 - ✓ Adequate ventilation, temperature and lighting
 - ✓ Fire detection and fire fighting equipment
 - ✓ Emergency routes and exits
 - ✓ Pedestrian and traffic management systems
 - ✓ Clean and well maintained interior walls, floors and traffic routes
 - ✓ Rest facilities for pregnant ladies or breastfeeding mothers are available in Room 225, Kevin Street
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- Everyone is obliged to care for these facilities and must not misuse them. All welfare provisions should be maintained in a clean safe condition
 - Arrangements for regular cleaning of premises and removal of waste should be made by the local Building Maintenance Manager. Cleaning and waste disposal are managed by Noonan Cleaners. Arrangements for cleaning and waste disposal is outlined in the risk assessments below
 - Drinking water is available to all staff in the main canteen (Annexe), the staffroom (4th floor, main building) and in drinking fountains in some corridors and a water dispenser in the School Office.

SENSITIVE WORK GROUPS

Protection of Children and Young Persons (under 18 years of age)

In cases where children must be present on Institute premises and therefore affected by our acts/omissions, sufficient notification must be given to the Health & Safety Office by the DIT host representative, of the situation, so that an appropriate risk assessment may be carried out. When on DIT property, the parents/guardians/host representative charged with responsibility for bringing the child onsite, must be responsible for that child and ensure that at all times they are supervised and protected from activities, processes, equipment, machinery, agents etc.

Circumstances where children are on site include:

- Transition year students
- School visits

All staff must familiarise themselves with the [DIT Child Protection Policy](#). (DIT HR website)

Children are not permitted in laboratories without permission from the Head of School of Chemical & Pharmaceutical Sciences.

Pregnant Post-Natal and Breastfeeding Employees/Students

The *Safety, Health and Welfare at Work (General Application) Regulations 2007*, places a duty on employers to assess the risks to determine any possible effects on new/expectant mothers resulting from any activity at the place of work.

- Each risk assessment will identify hazards in the workplace that could pose a health and safety risk to new and expectant mothers
- Where the assessment reveals a risk, then appropriate preventive or protective measures will be taken.
- Pregnant employees/students should advise their Line Manager and the DIT Health & Safety Office of their condition as soon as they are aware they are pregnant so that a confidential pregnancy risk assessment may be carried out
- Risk assessments are carried out by the Occupational Health Officer and the Line Manager or a representative from the School (where applicable)
- On returning to work/college any new mothers who are breastfeeding and require facilities should contact the Health & Safety Office

LONE AND OUT OF HOURS ACCESS

This refers to working in DIT buildings (VPN access is authorised through Line Management).

Lone working/out of hours access takes place in the School of Chemical & Pharmaceutical Sciences in the FOCAS Institute as per the policies and procedures of the FOCAS Institute. See 'lone working permission slip' in the safety manual.

WORK PLACEMENT

Work placement currently takes place in the School of Chemical & Pharmaceutical Sciences. Students are covered under DIT insurance, a DIT work placement Officer is in place, visits are made to students who are on workplacements.

Work placement fact sheets are available from the DIT Health & Safety Office for all host employers/organisations, DIT students and DIT mentors, and must be studied before arranging and undertaking any work placement.

Work placement health and safety policy is currently under review.

TRIPS/TRAVEL

Trips take place to Schools. Staff must complete a risk assessment prior to trips. All trips and travel proposals must have a risk assessment completed prior to the event.

STAFF/STUDENTS WITH DISABILITIES

When a disability is notified to the Disability Service, Health & Safety Office or the Head of School, specific risk assessments will be completed to ensure that the health and safety needs of staff and students with permanent/temporary disabilities are taken into account. Preventative and proactive measures will be put in place following the risk assessment if specific hazards are identified. Personal emergency egress plans (PEEPs) will also be prepared if required. The Disability Liaison Officer will provide specialist and competent advice and liaise with the Health & Safety Officer, Occupational Health Officers, College Manager and Building Maintenance Manager. The onus is on visitors with a disability to notify staff at the front desk, who may be able to assist in evacuation if required.

Individual risk assessments are required to be carried out by the School for non-standard operations e.g. projects. The DIT Health & Safety Office can facilitate this on request.

Please ensure all staff and students are familiar with the procedure and are referred to relevant services where necessary.

HEALTH SURVEILLANCE

Risk assessments will determine if health surveillance is required. Health Surveillance is made available to all staff appropriate to the health and safety risks present and facilitated by the Health & Safety Office. In certain circumstances, staff and students may be referred to our external Occupational Health Physician for a health assessment in relation to their work/studies to ensure that we can put in place any additional corrective action if required.

Eye tests are available for regular visual display unit users at the National Optometry Centre. Please familiarise yourself with the eye test policy which is available on the health and safety website. Staff who require glasses are required to have prescription safety glasses which are provided through the NOC.

WORKPLACE DRUGS, INTOXICANTS AND ALCOHOL

An employee/student must ensure that he or she is not under the influence of an intoxicant to the extent that he or she is in such a state as to endanger his or her own safety, health or welfare or that of any other person. Contraventions will be dealt with as per DIT disciplinary procedures.

DIGNITY AT WORK ANTI BULLYING & HARASSMENT POLICY AND PROCEDURES

The Institute's Dignity at Work Anti Bullying & Harassment Policy and Procedures deals with complaints against members of staff in the workplace, which also includes work-associated events such as meetings, conferences and work related social events, whether on the premises or off site. Bullying or harassment of staff/students will not be tolerated. Please ensure that all staff are familiar with the relevant [policy/procedure](#). The contact person in the School of Chemical & Pharmaceutical Sciences is Dr. Barry Foley.

OCCUPATIONAL-RELATED STRESS

The risk assessment will identify any areas where work-related stress is a hazard and controls will be implemented to eliminate this hazard. The HR department should be consulted immediately by the Head of School if an issue regarding stress is highlighted by a staff member or a medical certificate. An Employee Assistance Programme (EAP) is available to all staff. Students should liaise with their tutors in relation to issues regarding stress. Tutors are appointed for groups of students. Students may also seek assistance from the Student Health Centre and Student Counselling Service.

AUDIT, REVIEW AND COMMUNICATION

The School of Chemical & Pharmaceutical Sciences ensures that periodic health and safety audits are completed and a review of all Safety Statements and documentation takes place. This will be approved by DIT SLT Health and Safety Sub-Committee. All changes will be communicated to all staff, students, visitors and contractors/service providers. The most recent revision of all Safety Statements will be available on the DIT safety website and from the School of Chemical & Pharmaceutical Sciences Administrator.

DOCUMENT CONTROL

This document is a controlled document and as such any updates, review and distribution will be in accordance with DIT's standards for such documents. Only controlled copies will be updated when required.

The Head of School of Chemical & Pharmaceutical Sciences will issue new documents after appropriate consultation and agreement with relevant parties.

HAZARD IDENTIFICATION, RISK ASSESSMENT AND CONTROL MEASURES

It is the policy of the Institute to identify hazards in the workplace, assess the risk to safety and health and control these risks as far as is reasonably practicable.

The Framework Safety Statement outlines the generic hazards, which have been identified and the control measures that are in place.

It is incumbent on those responsible for managing their areas of work, at all levels, not merely to observe the arrangements described in the Framework Safety Statement, but to assess their applicability within their area of authority and where necessary to refine and extend them to deal with particular local situations. The management of the Dublin Institute of Technology is committed to ongoing identification of hazards, assessment of the appropriate risks and the introduction of controls to deal with them. Management at all levels have a responsibility to apply this principle within their area of authority.

Staff are encouraged to become involved and participate in safety, health & welfare issues. In particular, they are encouraged to identify any potential hazards, which may exist, and to ensure that a risk assessment is carried out.

Ongoing hazard inspections will be carried out periodically to ensure that the information is updated, controls are adequate and where necessary the risks are reassessed.

A **“hazard”** is taken to mean “any substance, article, material or practice which has the potential to cause harm to the safety, health or welfare of staff, students, visitors, contractors/service providers in DIT”. Hazards may be classified as:

- Physical
- Chemical
- Biological
- Operational
- Human Factors

“Risk” is a measure of the probability of the event occurring and the severity and extent of the injury, ill health or damage it may cause if it did occur.

Risks may be classified as:

- High
- Medium
- Low

High	Occurrence is probable, and could cause a fatality, serious injury or serious ill health to an individual or group of people.
Medium	Occurrence is possible and could cause injury or ill health to an individual or a small group of people.
Low	Occurrence is possible but unlikely, only minor injury would be caused and would probably be limited to a single individual.

The classification of hazards should be used to develop the priority of control measures, remedial actions, and the allocation of resources. As a general rule, the control measures will seek to eliminate any risk classified as high and reduce the potential of risks classified as medium or low.

Risk control measures are a combination of:

Elimination	Where the hazard is removed
Substitution	Where the hazard is exchanged for one of lesser classification
Isolation	Where the hazard is contained (e.g. Enclosures, guards etc.)
Engineering	Where common systems are used to protect all exposed to risk (e.g. Fire alarms, ventilation systems etc.)
Procedure	Where procedural controls are used. This will include procedures such as Standard Operating Procedures and training and the provision of information may apply to any and all of the above control measures
Personal Protection	Whereby the above means, the risk cannot be reasonably be reduced further, but an unacceptable level of risk remains, the team members are individually protected from the risk

Risk Assessments for School of Chemical & Pharmaceutical Sciences

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	FIRE Emergency Response & Evacuation Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Staff unfamiliar with evacuation procedure • Lack of evacuation drills • Use of naked flames • Improper storage of flammable or combustible materials • Smoking in undesignated areas • Faulty electrics • Inadequate emergency equipment • Misuse of equipment • Gas leak 	<ul style="list-style-type: none"> • Staff trained in ERT • Sufficient firefighting equipment available (break glass units, extinguishers, fire blanket) • Sufficient fire extinguishers in place • Firefighting equipment and detection systems maintained and tested • Evacuation signage in place • Emergency and first-aid procedures posted • Good housekeeping standards maintained • Several means of escape present and known to occupants • Evacuation procedure practiced each semester • Assembly point known to occupants 	<ul style="list-style-type: none"> • Remove any material that blocks vision panels on doors • Maintain current controls • Reduce fire load, especially of paper, in offices 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

			<ul style="list-style-type: none"> • Occupants escort visitors out • All exits are clear and free from obstructions • Staff members act as evacuation marshals • No smoking policy in place • Scheduled maintenance of buildings services (heating, electricity, ventilation etc.) takes place • Hot work permit system in place where needed • Compliance with building regulations • Site-specific Emergency Manuals available • Vision panels on doors where required • Fire blankets available in each lab • Please see Bunsen Burners • Signage on lab doors re unauthorised access • See chemical storage 				
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PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Manual Handling Examples: Moving hazardous materials, substances, apparatus, furniture, audio visual e.g. lab books, manuals and gas cylinders etc. Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Manual Handling-related injuries, e.g. back injury • Slips, trips, falls • Contact with hazardous materials, substances etc. 	<ul style="list-style-type: none"> • All staff compliant with and adhere to mandatory manual handling training • Trolleys, stools available for staff • Manual handling risk assessments available to all staff, contact local Occupational Health Officer • PPE used/worn where necessary • Good housekeeping • Suitable environment • Implement team lifting were required • Adequate lighting maintained • Assistance from colleagues - team lifting • Report issues to Line manager • Items not stored above shoulder height • Lift used instead of stairs 	<ul style="list-style-type: none"> • Refresher training to be carried out where necessary • Implement manual handling training 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Work Equipment, Machinery & Tools See Specific Hazards Risk Assessments	<ul style="list-style-type: none"> • See SPECIFIC EQUIPMENT RISK ASSESSMENTS • Noise • Vibration • Entanglement/ crushing • Electrics • Fumes/ dust • Contact with moving parts 	<ul style="list-style-type: none"> • Guards • SOP; use and maintenance • Training given and records kept • Service and maintenance • Signage in place • Supervision of students • Visual check before use • Report defects to line manager • Emergency stop • PPE worn/used • Follow manufacturer's instructions • Shut down after use and end of day • CE mark or equivalent mark as minimum • Damaged equipment marked and taken out of service 	<ul style="list-style-type: none"> • Maintain current controls 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Portable Appliances & Handheld Equipment e.g. Laptops	<ul style="list-style-type: none"> • Entanglement/ crushing • Electrics • Fumes/dust • Slips, trips and falls from cables • See also Ergonomics 	<ul style="list-style-type: none"> • Visual check before use • Report defects to Line Manager • CE mark or equivalent mark as minimum • Shut down after use and end of day • Follow manufacturer's instructions 	<ul style="list-style-type: none"> • Maintain current controls • Service and maintenance (PAT) will be carried out where required 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Noise Examples: <ul style="list-style-type: none"> • Fumehood fan Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Hearing loss / damage • Disruption/ distraction • Interference with communications and warning signals • Fatigue • Tinnitus • Students unable to hear instructions 	<ul style="list-style-type: none"> • Exposure times very short • Noise <80dB(A) • Peak noise <135dB(C) • Any noisy environment is risk assessed • Monitoring can be carried out by the DIT Health & Safety Office where need arises • Engineering controls • Information and training provided to staff and students • Follow manufacturer's instructions 	<ul style="list-style-type: none"> • Contact DIT Health & Safety Office where circumstances change / monitoring is required 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Structural: Floors Walls Ceilings Doors Fixed Shelving Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Personal Injury • Slips, Trips and Falls • Collapse • Trapping 	<ul style="list-style-type: none"> • Building appears to be structurally sound • Defects and hazards are reported to the Buildings Office through online hazard reporting • Doors open and close safely • Vision panels in place on doors where required 	<ul style="list-style-type: none"> • Remove any material that blocks vision panels on doors • Replace ceiling tiles that are missing • Repair loose/missing door handles • Repair door locks • Contact Buildings Office if problems arise 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	<p>Slips, Trips & Falls</p> <p>Most flooring is tiles or carpet in offices; wooden parquet flooring is present in labs</p> <p>Who is harmed:</p> <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Slips, trips and falls • Uneven surfaces • Wet floor conditions • Raised obstacles 	<ul style="list-style-type: none"> • All routes kept clear and unobstructed • SOP for cleaning – floors generally cleaned early morning See Noonan risk assessment • Use of warning signage where appropriate • Hazards are reported • Changes in floor levels identified and marked • Door mats provided at entrance (main entrance) • SOP for spillages • Handrail on steps/stairs • Stair nosing fitted with anti-slip finish • Adequate lighting • Good housekeeping • Retort stands stored above waist height • Hand bags stored off floor/out of walkways 	<ul style="list-style-type: none"> • Cables to be positioned/fixed so as to avoid slips, trips or falls • Fire load to be reduced (especially of paper) in offices • Improve housekeeping • Maintain current controls • Buildings Office to ensure upkeep and maintenance of internal and external access and egress routes e.g. walkways, paths, driveways, floors, corridors, steps and stairs 	<p>With current controls: L</p> <p>With Actions applied: L</p>	<p>Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences</p> <p>DIT Buildings Office</p>	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Access and Egress Opening Times: See DIT website Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Security threats • Threats from public • Violence / Assault • Unwanted visitors • Unauthorised access • Unsupervised access to hazardous materials 	<ul style="list-style-type: none"> • Access to CMRs and toxic/very toxic materials is strictly controlled by Technical staff • Laboratories are locked when not in use • Hazardous chemical stores locked and chemical inventory is updated and maintained • Front desk/Reception is manned by a Porter • CCTV in place • Suspicious activity reported to Porters • ERT covers procedure for suspicious activity • Good housekeeping Laboratories <ul style="list-style-type: none"> • Students are not permitted to enter labs without a staff member • Signage present on lab doors regarding unauthorised access 	<ul style="list-style-type: none"> • Report suspicious activity to Porters or Gardaí immediately • Labs should be locked when possible • Labs should be locked when not in use • Ensure all substances should be put away as soon as possible where practicable and necessary 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

			<ul style="list-style-type: none">• Appropriate signage on lab doors where hazardous substances are in use/stored• Retort stands stored above waist level				
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PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Photocopiers & Printers Shared staff printers; Photocopiers available in School Administration Office Who is harmed: <ul style="list-style-type: none"> • Staff members • Visitors • Contractors • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Changing toner etc.: chemical contact • Clearing jams: burns • Not wearing gloves • Not turning off electrical supply • Incorrect disposal • Personal injury • Lack of information / training 	<ul style="list-style-type: none"> • Toner / print cartridges changed by staff members who wash hands after use • Follow instructions on printer when clearing jams • Disposal as per manufacturer's directions • Maintenance by DIT IS where required • Correct disposal of waste cartridges • Follow manufacturer's instructions • Contractors are adequately controlled and instructed by the DIT Buildings Office and the School 	<ul style="list-style-type: none"> • Maintain standards • Gloves to be supplied and worn by the person while changing toner • Power must be turned off 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT IS	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Ergonomics: Office / Workstation Who is harmed: <ul style="list-style-type: none"> • Staff members • Visitors • Contractors • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • MSD's • Upper limb disorders • Poor posture • Back problems • Fatigue • Slips, trips and falls 	<ul style="list-style-type: none"> • Online eLearning programme available • Workstation risk assessments and information and training available from the Health & Safety Office on request • Contact OHO if risk assessments are required • Eye tests available to staff • Adequate services (heating, lighting ventilation) in place • Follow manufacturer's instructions when using equipment • Use of laptops for >1 hour is not recommended unless the correct equipment is provided i.e. laptop riser, separate keyboard and mouse 	<ul style="list-style-type: none"> • Maintain standards • Housekeeping to be improved • Good cable management required 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Health & Safety Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Mechanical Lifting Systems Examples: <ul style="list-style-type: none"> • Lift for gas cylinders • Waste solvent store 	<ul style="list-style-type: none"> • Injury to person • Person struck by load • Over turning/ rolling • Collapse or fall of load 	<ul style="list-style-type: none"> • Training specific to gas cylinders, liquid nitrogen and Winchesters given and trained records kept by Senior Technical staff • Service and maintenance records available • Signage in place where required • Used by trained staff members only • Visual check before use • Report defects to line manager • PPE provided and worn • Defects are reported • Safe working load marked • Statutory testing as required • CE mark or equivalent • Daily visual checks by operators • Follow manufacturer's instructions 	<ul style="list-style-type: none"> • Maintain standards • Housekeeping to be improved 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Health & Safety Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Vehicles/ deliveries on site Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Injury to person/ struck by vehicle Poor access and egress Bollards in place where appropriate	<ul style="list-style-type: none"> • Deliveries handled by Goods Inwards • Separate pedestrian access to car park available from Kevin St. • Car park is authorised access only • CCTV in place • Safe access and egress maintained • Car park spaces marked out clearly • Speed limit in place • Designated walk ways • Designated area for loading and unloading goods present • Defects reported to DIT Buildings Office • Adequate lighting in place • Hi-vis clothing worn where required 	<ul style="list-style-type: none"> • Staff and students to use walkways provided • Maintain standards • Ensure parking in designated areas only i.e. not in front gas cylinder stores or gas cages outside ground floor labs 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	<p>Hot Surfaces / Liquids / Solids</p> <p>E.g. <u>Hot plates</u>; Cups of hot beverages</p> <p>Please see Specific Hazards Risk Assessment</p> <p>Who is harmed:</p> <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Contact burns • Scalds • Spillage • Exposure to hazardous chemicals and substances 	<ul style="list-style-type: none"> • Lids available for cups • Notify Front desk/Reception of spillages • Spillages cleaned up immediately • SOP in place for spillages: Noonan • Wet floor signage available for spillages • School SOP available for Spillages • Person who finds/is responsible for a spillage ensures clean-up has taken place before leaving the area 	<ul style="list-style-type: none"> • Maintain standards 	<p>With current controls: L</p> <p>With Actions applied: L</p>	<p>Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences</p> <p>Noonan Cleaners</p>	<p>Ongoing</p>

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Pressure Systems Examples <ul style="list-style-type: none"> Gas cylinders Please see Specific Hazards Risk Assessment Who is harmed: <ul style="list-style-type: none"> Staff members Students Visitors Contractors Young persons Pregnant Postgraduates People with disabilities 	<ul style="list-style-type: none"> Contact burn Personal injury Explosion Spillage Release of steam/ fluid / air 	<ul style="list-style-type: none"> Cylinder heads are checked and maintained as prescribed SOP in place Service and maintenance Training provided to staff Defects are reported PPE worn/used First-aid kit available Signage in place where required Follow manufacturer's instructions Certificate of test examination available 	<ul style="list-style-type: none"> Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Radiation No sources	• N/A	• N/A	• N/A	• N/A	• N/A	• N/A

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Vibration No sources of vibration	• N/A	• N/A	• N/A	• N/A	• N/A	• N/A

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	<p>Services: Heating</p> <p>Gas fired central heating in place throughout DIT, Kevin Street</p> <p>Who is harmed:</p> <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Environment too hot or cold • Electrical hazards • Misuse of portable heaters • Leaks • Fire • Burns • Carbon monoxide poisoning 	<ul style="list-style-type: none"> • Oil-filled radiators and other portable radiators are turned off when not supervised • Fans used for air circulation are used correctly and do not cause an added hazard • Electrics appear to be up to standard • Cables neatly positioned • Contact Buildings Office if problems or defects arise • Service and maintenance carried out by competent person • Combustible materials kept away from heat source • Heat source kept clear and free from obstruction • Environmental monitoring from the Health & Safety Office on request 	<ul style="list-style-type: none"> • Maintain standards • Reduce fire load, especially of paper, in offices 	<p>With current controls: L</p> <p>With Actions applied: L</p>	<p>Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences</p> <p>DIT Buildings Office</p>	Ongoing

			<ul style="list-style-type: none">• Adequate ventilation by openable windows and AC system• Fire detection systems in place: Main building and Annexe building linked				
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PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Lighting Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Inadequate lighting • Glare • Slips, trips, falls 	<ul style="list-style-type: none"> • Light switches easily accessible (height) • Adequate lighting in place • Defects are reported to the Buildings Office • Protective coverings in place where required • Environmental monitoring available from the Health & Safety Office on request • Service and maintenance carried out by competent person • Blinds are in place on windows where required 	<ul style="list-style-type: none"> • Maintain standards • Replace missing bulbs and flickering lights 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Ventilation and temperature Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Environment too hot or cold • Inadequate ventilation • Falls from heights from windows 	<ul style="list-style-type: none"> • All windows openable • Safety catches in place where required • Blinds in place and in working order where required • Suitable equipment available for the opening and closing of windows • Defects are reported to the Buildings Office • Service and maintenance of ventilation system carried out by competent person • Office temperature of at least 17.5°C (after one hour of work) • Environmental monitoring from the Health & Safety Office on request 	<ul style="list-style-type: none"> • Maintain standards • Roof covering or similar required for G-37 by Buildings Office 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Electricity Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Electric shock • Electrocution • Ignition source • Fire • Explosion • Death • Electrical arcing • Damaged electrical equipment • Use of faulty equipment • Contact with live parts • Unmarked distribution boards • Inadequate electrical installations 	<ul style="list-style-type: none"> • Works/repairs carried out by qualified persons • Sufficient numbers of electrical sockets • Electric leads not trailing and good cable management • Sockets are not overloaded • Competent person to carry out repairs / works • All works servicing and testing is carried out as per regulations • Shut down when not in use and end of day • Contact Buildings Office if problems arise • Adequate protection for circuit boards, distribution boards etc. • Report defects, take equipment out of use • Good housekeeping 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Asbestos The School use sealed sample slides as part of a practical Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Exposure to airborne fibres and subsequent illnesses 	<ul style="list-style-type: none"> • School sample slides are sealed • Buildings Office take advice from appropriate consultants to ensure asbestos is made safe if suspected • DIT Asbestos Register available from the DIT Buildings Office • All known asbestos is sealed and does not pose a threat • DIT will review locations where there is asbestos insitu 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	DIT Buildings Office	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Confined Spaces	• N/A	• N/A	• N/A	• N/A	• N/A	• N/A

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Lasers Lasers are present as part of equipment Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Skin injury • Eye injury • Unauthorised access 	<ul style="list-style-type: none"> • Users are made aware of dangers • Lasers are only present within pieces of equipment • Laser beam path is enclosed • Beam is reflected • SOP in place for use • Beams are horizontal • Information and training • Signage on door where required • No personal jewellery permitted 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

PHYSICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Construction / Maintenance Work Examples: <ul style="list-style-type: none"> Noonan Cleaners Building contractors Who is harmed: <ul style="list-style-type: none"> Staff members Students Visitors Contractors Young persons Pregnant women Postgraduates People with disabilities 	<ul style="list-style-type: none"> Unfamiliar with DIT buildings and safety procedures Injury to contractors, staff, students, members of the public 	<ul style="list-style-type: none"> Head of School or a representative from the School is aware of any maintenance being carried out PPE worn by contractors as appropriate Maintenance in laboratories is by arrangement only and in general does not take place during class time Buildings Office control all contractors and send communication to staff regarding works Front desk/Reception is manned at all times Sign in required Compliance with DIT code of practice for contractors Signage in place eLearning completed before contractors arrive on DIT premises 	<ul style="list-style-type: none"> Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

			including the need for PPE in laboratories <ul style="list-style-type: none"> • DIT Contractor safety badge issued and worn • Risk assessment and method statements completed and submitted to the Buildings Office • Good housekeeping standards maintained • Areas of works cordoned off 				
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OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Work Activities / Processes Please see Specific Hazards Risk Assessments						

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Housekeeping Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Slips, trips and falls • Increased fire load • Falling objects • Collisions • Spillages 	<ul style="list-style-type: none"> • Retort stands not stored on floor: stands are stored above waist level • Equipment stored on suitable shelving/in suitable cabinets / containers etc. • Fire load kept to a minimum • All routes kept clear and unobstructed • Wet floor signs in place when required by lab aids • Chemical spillages cleaned up immediately with spill kit • Adequate lighting in place • Adequate waste disposal • Designated chemical stores and equipment stores in place • See controls for slips, trips & falls also • Spillages SOP in place • See Spillages also 	<ul style="list-style-type: none"> • Maintain standards • Reduce fire load, especially of paper, in offices 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Cleaning Cleaning takes place in general before opening of building by Noonan Cleaners Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Lack of cleanliness or hygiene • Manual handling injury • Exposure to hazardous substances • Spillages: slips, trips and falls • Lack of/inappropriate PPE 	<ul style="list-style-type: none"> • Glassware is cleaned after each session • Lab aids undertake deep cleaning of labs out of teaching weeks • Daily cleaning is carried out by lab aides • SOPs in place where required • Lab aides ensure laboratory areas are chemically clean before Noonan clean floors • Noonan clean floors of laboratories; mostly when building is unoccupied: See Noonan risk assessment • PPE used/worn where required • Materials and containers adequately labelled • Training and information (chemicals) • Wet floor signage in place when required 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

			<ul style="list-style-type: none">• Adequate and designated storage area for cleaning materials and equipment• Use of appropriate cleaning equipment• Report defects and hazards• Manual handling training completed and implemented				
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OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Waste Disposal & Removal: General Removal of waste by Noonan Cleaners usually during cleaning Please see Chemical Waste Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Waste accumulation • Fire • Sharps injuries • Exposure to bodily fluids • Manual handling injury • Exposure to hazardous substances • Spillages: slips, trips and falls • Lack of/inappropriate PPE 	<ul style="list-style-type: none"> • Recycling bins available: paper, shredding etc. • See Noonan SOP & risk assessment • General waste segregated by Thorntons • Waste removed on a regular basis • PPE worn/used by Noonan Cleaners • Instruction and training given to operators • Labelling of waste where necessary • Designate waste storage area present • Manual handling training completed/implemented • Equipment for transport of waste e.g. trolleys • See Chemical Waste • DIT policy in place: Safe Handling of Sharps & Needle Sticks Policy 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Signage and Documentation Please see Specific Hazards Risk Assessments Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Lack of knowledge regarding safety procedures 	Signage in place includes: <ul style="list-style-type: none"> • Signage on lab doors regarding chemical use and 'No entry' where relevant • Relevant signage posted as per hazards e.g. PPE (safety glasses/lab coat) • Emergency Exit • Emergency First-aid • Evacuation plan • Safety Notice points • Fire Action Notice Points • No Smoking Other: <ul style="list-style-type: none"> • Emergency contact numbers at Front desk/Reception • Safety booklets/safety wallet cards available • Defects reported to Buildings Office / Health & Safety Office 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Incidents Hazard Reporting First-aid Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Lack of first-aid supplies • Lack of trained first-aiders • Lack of knowledge of procedure in the event of an incident • No reporting of incident(s) • No reporting of hazards 	Each lab has: <ul style="list-style-type: none"> • First-aid kit • Staff trained in first-aid • Emergency numbers • Emergency first-aid procedure posted • SOP for first-aid in chemical laboratories available Front desk/Reception: <ul style="list-style-type: none"> • Incident report book • AED & first-aid kit • Emergency numbers General: <ul style="list-style-type: none"> • All incidents are reported immediately and an incident report form completed • First-aid supplies available from OHO on request • List of trained first-aiders & AED users available on the DIT website 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

			<ul style="list-style-type: none"> Online hazard reporting facility available 				
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OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Use of Ladders / Working at Height Staff are not permitted to use ladders/work at height	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> N/A

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Lone Working/ Out of Hours Access	<ul style="list-style-type: none"> Violence Inability to make contact in the event of an emergency etc. Unauthorised access 	<ul style="list-style-type: none"> Swipe card system in place in FOCAS Procedures for FOCAS Institute followed DIT Policy in place Risk assessment carried out and control measures implemented Buddy system in place Structural and security controls for safe access and egress Mandatory training completed 	<ul style="list-style-type: none"> Staff and students to follow DIT and FOCAS procedures 	<p>With current controls: L</p> <p>With Actions applied: L</p>	<p>Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences</p> <p>FOCAS Institute Management</p>	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Trips Trips include visits to Pharmachem companies and other Schools and Colleges Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Injuries • Medical emergencies • Accidents and incidents • Missing persons • Substance abuse • Road Traffic Accidents • Inclement weather • Chemical hazards • Biological hazards • Human Factors 	<ul style="list-style-type: none"> • DIT Trip risk assessment in place • DIT trip guidelines in place • Separate trip risk assessment template completed for each trip and control measures implemented • Information provided to trip participants • Elearning programme available to participants on request: Contact OHO 	<ul style="list-style-type: none"> • Maintain standards • Ensure risk assessments are carried out for each trip 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Health & Safety Office	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Work Placement Placement to various companies Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Injuries • Accidents and incidents • Lack of familiarity with work environment and work practices 	<p>*** Work placement is currently under review and details will be inserted once finalised ***</p> <ul style="list-style-type: none"> • Work placement factsheets can be requested from the DIT Health & Safety Office and given to participants • Pre-placement induction safety talks can be facilitated by the DIT Health & Safety Office • DIT Placement Mentor available • Guidance notes available to students • All incidents are reported to DIT • Insurance cover provided • Training and supervision given to students where required 	<ul style="list-style-type: none"> • Maintain standards • Ensure risk assessments are carried out for work placement 	<p>With current controls: L</p> <p>With Actions applied: L</p>	<p>Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences</p> <p>DIT Health & Safety Office</p>	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Events Hosting Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Injuries • Accidents and incidents • Unfamiliar with DIT premises and emergency plans 	<ul style="list-style-type: none"> • Risk assessment carried out and control measures implemented • Emergency plans in place as per risk assessment • Report all incidents and accidents to DIT 	<ul style="list-style-type: none"> • Maintain standards • Head of School to ensure risk assessments are carried out for all events 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Conferences / Seminars Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Travel to and from • Road traffic accidents • Unfamiliar with venue • Medical emergency • Missing persons 	<ul style="list-style-type: none"> • Taxi vouchers available to staff • Staff obey rules of the road if driving or cycling • Adequate insurance, tax and NCT on vehicles used for transport • Familiarise yourself with local emergency procedures and first-aid arrangements • Report defects and incidents to venue management or Gardaí where necessary • Approval sought from Line Manager as per DIT procedures 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

OPERATIONAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Storage: General See Chemical Storage also Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Explosion, fire, various reactions as a result of improper/incorrect storage of chemicals • Inadequate storage • Improper storage • Inadequate space for safe manual handling • Poor housekeeping • Slips, trips and falls • Unsafe access and egress • Inadequate lighting and/or ventilation 	<ul style="list-style-type: none"> • See School Safety Manual for Chemical Incompatibilities • Only competent staff enter storage areas • Safe access and egress • Storage avoided above shoulder height where possible • Items stored appropriately and segregated where required • Storage cabinets/units secure and fit for purpose • Locking system in place for storage cabinets/units • Step ladder available for accessing higher shelving units • Staff trained in manual handling and apply training: see 'Manual Handling' also • Appropriate signage in place • Items not stored in walkways • Defects reported immediately • Adequate lighting and ventilation in place 	<ul style="list-style-type: none"> • Maintain standards • Parking in front of chemical and gas storage areas to be prohibited • Remove drum hoist located outside G40 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Sensitive Work Groups: Pregnant Employees /Students & Nursing Mothers	<ul style="list-style-type: none"> • Harm to Mother, unborn child or breastfeeding baby • Physical risks • Chemical risks 	<ul style="list-style-type: none"> • Pregnant staff member/student inform Supervisor of pregnancy as soon as possible • Risk assessment carried out for pregnant employees/students and control measures implemented as identified and necessary by Health & Safety Office • Risk assessment will be completed in conjunction with the Line Manager / a representative from the School where necessary regarding chemical exposure • Room available (Room 225, DIT, Kevin Street) available for resting, breastfeeding and expressing milk • Follow medical advice 	<ul style="list-style-type: none"> • Maintain standards 	<p>With current controls: L</p> <p>With Actions applied: L</p>	<p>Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences</p> <p>DIT Health & Safety Office</p>	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Sensitive Work Groups: Young Persons (<18 years of age on DIT premises) Circumstances include: <ul style="list-style-type: none"> • DIT students • Transition Year Students • Event attendees 	<ul style="list-style-type: none"> • Injuries • Accidents and incidents • Lack of training and experience • Lack of familiarity with DIT work environment, work practices and emergency plans • Physical risks • Chemical risks • Biological risks • Hours of work 	<ul style="list-style-type: none"> • General induction process given by School • Induction available from the Health & Safety Office on request • Elearning available from Health & Safety Office • Training and supervision given • DIT Child Protection Policy in place • DIT emergency plans in place • All incidents are reported to DIT • Student support services available • Garda vetting in place 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Health & Safety Office	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Sensitive Work Groups: People with Disabilities	<ul style="list-style-type: none"> • Lack of access/egress • Difficulty with evacuation • No risk assessment (RA) completed 	<ul style="list-style-type: none"> • DIT Disability Office send information to DIT Health & Safety Office • Risk Assessment carried out by the Health & Safety Office where required • Risk assessment carried out by the School and facilitated by the Health & Safety Office for non-routine work e.g. projects • Personal Emergency Egress Plan (PEEP) completed where necessary • Reasonable accommodation identified in risk assessment • Lift present and in working order • Disability Support Service available • Disabled toilet: ground floor Annexe: location 	<ul style="list-style-type: none"> • Maintain standards • Repair lift as soon as possible where it breaks down 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office DIT Health & Safety Office	Ongoing

			marked on building maps • Induction/Elearning available from Health & Safety Office on request				
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HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Sensitive Work Groups: New Recruits: Full-time and part-time staff members	<ul style="list-style-type: none"> • Lack of experience • Lack of training • Injuries • Accidents and incidents • Lack of training and experience • Lack of familiarity with DIT work environment, work practices and emergency plans 	<ul style="list-style-type: none"> • Induction available (in person or online) from Staff Training & Development, including a Health & Safety section • Health & Safety Elearning available: contact the DIT Health & Safety Office • Line Manager gives induction for School • Training and supervision in place by management 	<ul style="list-style-type: none"> • Maintain standards • School SOPs to be communicated to new recruits • Line Manager should give induction for School • Mandatory training to be completed as soon as possible after recruitment 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Sensitive Work Groups: Undergraduates	<ul style="list-style-type: none"> • Lack of experience • Lack of training • Injuries • Accidents and incidents • Lack of familiarity with DIT work environment, work practices and emergency plans 	<ul style="list-style-type: none"> • All work with chemicals is risk assessed prior to commencement • Induction available from the DIT Health & Safety Office on request • Elearning available from DIT Health & Safety Office on request • Emergency procedures in place for Kevin Street • First-aid facilities available • Safety induction given by lecturers where required • Task-specific instructions/ demonstrations provided by staff where required • Supervision of students by staff members • Student support services available 	<ul style="list-style-type: none"> • Maintain standards 	<p>With current controls: L</p> <p>With Actions applied: L</p>	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Sensitive Work Groups: Postgraduates	<ul style="list-style-type: none"> • Lack of experience • Lack of training • Injuries • Accidents and incidents • Lack of familiarity with DIT work environment, work practices and emergency plans • Remote working 	<ul style="list-style-type: none"> • Induction available (in person or online) from Staff Training & Development, including a Health & Safety section • Health & Safety Elearning available: contact the DIT Health & Safety Office • School SOPs in place • Training and supervision in place by supervisor 	<ul style="list-style-type: none"> • Maintain standards • Line Manager shall give induction for School • Mandatory training to be completed as soon as possible after recruitment • School SOPs to be communicated to new recruits • Supervision of postgraduates to be ensures • Ensure plans in place with School where remote working takes place • Role of postgraduate supervisor to be outlined clearly and communicated 	<p>With current controls: L</p> <p>With Actions applied: L</p>	<p>School of Chemical & Pharmaceutical Sciences Staff and Postgraduate Students</p> <p>DIT Staff Training & Development</p> <p>DIT Health & Safety Office</p>	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Occupational related Stress Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Physical health effects • Mental health effects • Behavioural effects • Cognitive effects • Workload 	<ul style="list-style-type: none"> • Communication between staff and management • Employee Assistance Programme (EAP) in place provided by VHI to all employees • Occupational Stress Management Policy & Procedures in place • Training courses available on Stress Management, personal skills etc. to staff • Student services and Student Counselling available • Occupational Health Physician available: Medmark 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Staff Training & Development	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Violence (including Cash) Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Theft of money, laptops, chemicals etc. • Attacks/assault: verbal, physical etc. between parties i.e. staff, students etc. 	<ul style="list-style-type: none"> • Emergency Response Training (ERT) mandatory for staff • CCTV in place • Porters on duty at Front desk/Reception • DIT staff and students report suspect individuals to DIT Buildings Office • Adequate lighting in place • See Storage of Chemicals • Controlled access to laboratories • Controlled access to chemical storage areas 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Bullying & Harassment Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Effects on physical and mental well-being 	<ul style="list-style-type: none"> • DIT Dignity at Work: Anti Bullying & Harassment Policy in place • Dignity at Work contact persons available: Dr. Barry Foley • Employee Assistance Programme (EAP) in place provided by VHI available to all DIT employees • DIT Procedure for complaints and investigations • Student support services available 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	<p>Welfare Facilities:</p> <p>Sanitary Facilities;</p> <p>Staffroom / Canteen</p> <p>Who is harmed:</p> <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Inadequate facilities • No potable water • No means for boiling water/heating food • No seating/resting area • No hand-washing facilities 	<ul style="list-style-type: none"> • Hot/cold water available in sanitary facilities • Disabled toilet available on ground floor Annexe and marked on maps • Adequate sanitary and hand-washing facilities available • Defects reported to the Buildings Office <p>Facilities for seating and taking meals available at:</p> <ul style="list-style-type: none"> • Canteen: Ground floor: Annexe • Staff room: 4th floor (hot water, microwaves, washing-up facilities etc.) • Staff are not permitted to have white goods/domestic appliances in non-designated areas <p>Drinking water available:</p> <ul style="list-style-type: none"> • Water dispensers in School office (serviced 	<ul style="list-style-type: none"> • Maintain standards • Staff in the School request that the water dispenser be moved from the School office to the technicians office or that a second water dispenser be provided in the technicians office due to lack of access to the School office 	<p>With current controls:</p> <p>L</p> <p>With Actions applied:</p> <p>L</p>	<p>Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences</p> <p>DIT Buildings Office</p>	Ongoing

			by: Tipperary Water) • Water fountains in corridors • Canteen and staffroom				
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HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Visitors Types of visitors: Event Participants; Erasmus Students Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Lack of experience • Lack of training • Injuries • Accidents and incidents • Lack of familiarity with DIT work environment, work practices and emergency plans 	<ul style="list-style-type: none"> • Front Desk/Reception is manned at all times • Porters on duty • Visitors report to Front desk/Reception • Safety booklets and safety wallet cards available • Emergency and informational signage in place • Risk assessments completed for specific events where groups of visitors are expected • CCTV in place • Deliveries handled by Goods Inwards • Visitors briefed on emergency procedures by the person by the DIT contact they are visiting 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Contractors / Service Providers Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Unfamiliar with DIT buildings and safety procedures • Injury to contractors, staff, students, members of the public 	<ul style="list-style-type: none"> • The DIT Buildings Office has developed a Contractors Safety Code • School notify Buildings Office where contractors are coming onsite under their remit • Buildings Office control all contractors who also send communication sent to staff regarding works • Front desk/Reception is manned at all times by a Porter • Sign in required • Compliance with DIT code of practice for contractors • Signage in place • eLearning completed before contractors arrive on DIT premises • DIT Contractor safety badge issued and worn • Risk assessment and method statements 	<ul style="list-style-type: none"> • The DIT Buildings Office Contractors Safety Code to be further developed and made specific to the School of Chemical & Pharmaceutical Sciences and given to service engineers by the School • Maintain standards • Contractors/service providers must wear safety glasses in designated areas • Liaison person from the School to be assigned 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

			<p>completed and submitted to the Buildings Office</p> <ul style="list-style-type: none"> • Good housekeeping standards maintained • Areas of works cordoned off 				
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HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Behaviour Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant women • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Aggression • Violence • Stress • Bullying • Harassment • Voice injury including voice trauma, chronic hoarseness, laryngitis etc. due to shouting / straining by lecturers 	<ul style="list-style-type: none"> • DIT Dignity at Work: Anti Bullying & Harassment Policy in place: contact person is Dr. Barry Foley • Employee Assistance Programme (EAP) in place provided by VHI for all DIT employees • Occupational Stress Management Policy & Procedures in place • All incidents are reported immediately • DIT Disciplinary procedures in place • DIT Procedure in place for the Resolution of Disputes/Grievances • DIT training available on Stress Management, personal skills, voice use etc. 	<ul style="list-style-type: none"> • Follow procedures in DIT's Dignity at Work: Anti Bullying & Harassment Policy • DIT IS and DIT Buildings Office to maintain multimedia systems • Contact IS and Buildings Office if problems arise with multimedia systems • Lecturers to use correct techniques in voice amplification 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT IS DIT Buildings Office	Ongoing

HUMAN FACTORS							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Personal Protective Equipment (PPE) PPE used: Students: <ul style="list-style-type: none"> • Lab coat • Safety glasses/ prescription safety glasses • Gloves Staff Members: <ul style="list-style-type: none"> • Lab coat • Safety glasses • Gloves • Face shield Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant 	<ul style="list-style-type: none"> • Improper fit and use • Incorrect type • Poor maintenance • Lack of training • Exposure to physical or hazardous substances • Slips, trips and falls • Lack of awareness of PPE requirements • Contamination 	<ul style="list-style-type: none"> • Appropriate selection of PPE • Consultation with staff • Inspection and maintenance of PPE • Students are responsible for laundering their own lab coat and having safety glasses or prescription safety glasses • Contact lenses are not allowed to be worn • Staff coats are laundered by Spring Grove • Defects reported • Lockers provided for technical staff and laboratory aides • Training, information and supervision • Signage in place where PPE is required e.g. on lab doors • Students are not permitted into the lab 	<ul style="list-style-type: none"> • Maintain standards • Lockers to be made available for academic staff working in laboratories 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences	Ongoing

	<ul style="list-style-type: none"> • Postgraduates • People with disabilities 		without the relevant PPE <ul style="list-style-type: none"> • Students are supervised by staff while to ensure the wearing of PPE • Follow manufacturer's instructions • PPE: personal use only 				
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CHEMICAL							
Ref	Hazard	Hazard Potential & Consequences	Control Measures		Risk H/M/L (with controls)	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
	Gas Gas Cylinders in use; Gas supply piped into laboratories See School Safety Manual for types and locations Who is harmed: <ul style="list-style-type: none"> • Staff members • Students • Visitors • Contractors • Young persons • Pregnant • Postgraduates • People with disabilities 	<ul style="list-style-type: none"> • Gas leak • Fire • Explosion • Suffocation • Carbon monoxide poisoning • Asphyxiation • Oxygen may promote flammability in other materials • Toxic/Exposure to gas 	<ul style="list-style-type: none"> • Inspection, testing and maintenance/servicing carried out • SOP in cylinder use and handling • Detection and monitoring systems in place by MIPS (natural gas, hydrogen, acetylene etc.) • Adequate ventilation • Staff are competent • Strict procurement procedures in place • Registered installer used for all installations, maintenance etc. • Training, information and supervision • Restricted access • Minimum quantities stored on site; gas piped in from outside where possible • Cylinders are stored in an upright manner and chained to the bench or 	<ul style="list-style-type: none"> • Maintain standards 	With current controls: L With Actions applied: L	Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences DIT Buildings Office	Ongoing

			<p>trolley</p> <ul style="list-style-type: none"> • Cylinders, regulators and associated equipment are kept clean and free from grease, oil and other contaminants and replaced as necessary. • A regulator is used when connecting to a lower pressure system • Cylinders are never rolled along the floor/ground. Trolleys which are suitable are used • Leaking or damaged cylinders or those which cannot be properly identified must not be used • Damaged or unidentified cylinders must be returned to the supplier • Members of staff required to move cylinders are trained in manual handling • H₂ generators used instead of H₂ cylinders 				
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SCHOOL OF CHEMICAL & PHARMACEUTICAL SCIENCES SPECIFIC HAZARDS RISK ASSESSMENT

1. Hazard: Use of Chemical Agents/Substances
2. Hazard: Storage of Chemical Agents/Substances
3. Hazard: Transport of Chemical Agents/Substances
4. Hazard: Disposal of Chemical Waste
5. Hazard: Fumehoods/Fume Cupboards
6. Hazard: Nuclear Magnetic Resonance (NMR)
7. Hazard: Graphite Furnace Atomic Absorption
8. Hazard: Atomic Absorption
9. Hazard: Gas Chromatograph
10. Hazard: Gas Chromatography Mass Spectrometer (Saturn 4D)
11. Hazard: Gas Chromatography Mass Spectrometer (Saturn 2000)
12. Hazard: Gas Chromatography (GC) 3400 CX
13. Hazard: Ion Chromatography
14. Hazard: Capillary Electrophoresis
15. Hazard: Sharps, Surgical Blades, Syringes etc.
16. Hazard: Bunsen Burners
17. Hazard: Rubber and Plastic Tubing
18. Hazard: Laboratory Refrigerators, Freezers & Fridge-Freezers
19. Hazard: Mercury Thermometers
20. Hazard: Spillages
21. Hazard: Microscopes
22. Hazard: Water Baths
23. Hazard: Hot Plates, Heat Stirrers & Heating Mantels
24. Hazard: Glassware
25. Hazard: Ultra Violet Light Sources (UV Light Box) & Trans-Illuminator

Note: Specific risk assessments for non-standard equipment is undertaken by the staff member responsible for that equipment.

Hazard: Use of Chemical Agents/Substances

Risks

- Illness, injuries from exposure

Control Measures

General

- Chemical agents risk assessments will be carried out for activities which are of such a duration or so frequently performed or involving such hazardous chemicals as to pose a risk of exposure to staff or students. Following the risk assessment measures may be specified to ensure that the risk is reduced to the lowest possible level. Measures may include substitution of one chemical for a less hazardous one, restricting the number of persons using or in contact with the chemical, engineering controls such as the use of a fume hood, training or the use of personal protective equipment
- Each laboratory must keep an up to date printed copy of all safety data sheets (SDS) for chemicals stored or used in that laboratory. When new chemicals are ordered the relevant SDS will be requested from the supplier. The SDS must be readily available to all lab users
- Before new chemicals are ordered staff must ensure that safety alternatives have been investigated. A safety alternative could be purchasing a solution rather than making up a stock from a hazardous dust
- Staff must be familiar with the contents of the SDS and bring to the attention of students the hazards associated with the chemicals
- Staff must be familiar with the contents of the School Safety Manual and bring the content to the attention of students.
- Staff must be aware of the spillage clean up procedures for the chemicals they use on a regular basis. Spill kits are supplied in each laboratory
- Toxic chemicals are stored securely
- First-aid kits, eyewash stations and trained first-aiders are available in each lab
- All academic and technical staff have emergency first-aid training

General storage of chemicals

- Ensure that all containers are in good condition, properly capped, and properly labelled.
- There should be no unlabeled container, and NO container should ever be labeled using the word WASTE.
- Solutions or chemicals stored in containers other than their original container or waste must be labeled with the name of the chemical, the concentration if relevant, the hazard warning (e.g. toxic, corrosive, flammable etc.), the name of the person responsible for making up the solution, the date the solution was made up and expiry date
- Store incompatible chemicals separately. Safety Data Sheets also provide information on incompatibility in line with storage protocols
- Do not store chemicals in alphabetical order without consideration for chemical compatibilities. An alphabetical system may cause incompatible materials being stored next to one another (e.g. butadiene next to bromine or chlorine)
- Fume hoods should not be used as storage areas
- Access to storage areas is key controlled and access is limited to authorized personnel

Flammables

Flammable and combustible chemicals are materials which, under standard laboratory conditions, can generate sufficient vapors to cause a fire in the presence of an ignition source. Materials which generate sufficient vapors to ignite at temperatures below 38°C are "flammables," whereas materials that require temperatures above 38°C to provide sufficient vapors for ignition are "combustibles."

The following precautions should be observed when using these materials:

- Flammable materials must be stored in a flammables cabinet. The door of the cabinet should be kept closed when not in use
- Segregate flammables from oxidizing acids and oxidizers
- Volumes of flammables stored should be kept to a minimum. Small amounts of flammables are kept in laboratories (not greater than 500cm³)
- No more than 50 litres of flammable liquids should be stored in any laboratory and then only when there are suitable flammables cabinets
- Consideration should be given to letting the supplier deliver flammables 'just in time'
- Flammables in glass Winchesters should not be left on the bench in sunlight as they are likely to reach their flash point and cause an explosion and fire
- Flammables must not be stored in fume hoods where there is a bunsen burner or other heat source
- Secure screw caps on containers immediately following dispensing
- Do not dispense into beakers and allow to remain at bench top level. Flammable and combustibles should be placed in a fume hood as soon as possible and used
- Do not allow flammable liquids to evaporate in a fume hood as a means of disposal
- Eliminate ignition sources such as open flames, hot surfaces, operation of electrical equipment, and static electricity from areas in which flammable or combustible materials are used or stored
- Refrigerators and freezers used for the storage of flammable and combustible liquids must be non-sparking (Ex rated)
- Ensure that there is proper bonding and grounding when transferring between metal containers or dispensing a flammable liquid from a large container or drum.
- Flammable waste is removed when Winchester is $\frac{3}{4}$ full

General Transport of Chemicals

- Only transport items that are sealed (lid closed – no open beakers or flasks
- Small items may be carried by hand.
- Trolleys/baskets should be used where a number of small items are being carried.
- Winchesters should be carried using carriers designed for this purpose
- General principals of good manual handling apply
- Inform yourself of the hazards associated with the chemical being transported and be aware of what to do in the event of a spill
- If a spill occurs in the lift. Ensure that lift is taken out of action and organize clean-up.
- Never leave a spill unattended.

Personal Protective Equipment

- Safety glasses/prescription safety glasses must be worn at all times in the laboratories
- Laboratory coats must be worn at all times when using hazardous chemicals
- Where there is a risk of a hazardous chemical splashing into the eyes, safety glasses must be worn with side protection. Ordinary corrective spectacles do not provide sufficient protection. Staff who wear spectacle will be provided with safety glasses that fit over their own glasses or prescription safety glasses
- Staff must ensure that students wear appropriate eye protection
- Contact lens are not allowed to be worn in the laboratory
- Staff should ensure that the correct types of gloves are selected for work with hazardous chemicals. Latex gloves are not used in laboratories

Safety Equipment

- Where emergency showers or eyewash basins are installed, these must be tested at least once per term.
- It is good practice to operate the eye wash station at least once per week
- Eyewash bottles must be checked regularly to ensure they are in date. If the seal is broken the bottle must be replaced
- Fume hood efficiency will be tested on an annual basis by designated competent contractor
- All staff and students are trained in the use of eyewash stations, fire blanket and fire extinguishers

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Storage of Chemical Agents/Substances

Please refer to the Chemical Safety Manual (available in the Appendices)

Storage includes:

- Chemical stores
- Solvent stores
- Laboratory chemical stores
- Gas cylinder stores

Risks:

- Fire
- Explosion
- Reactions due to incompatible chemicals/solvents etc.
- Slips, trips and falls
- Incorrect use of substances due to incorrect labelling
- Release of chemical to inappropriate drain

Please refer to the laboratory safety manuals

Control Measures:

General Solvent/Chemical Stores

- Solvent storage area is segregated from the main building and is kept locked at all times
- Key to chemical storage area is controlled and access is limited and controlled School management
- Restricted access
- Mechanical air ventilation in place
- Segregated storage of chemicals classified as Oxidising/Reducing/Toxic/Corrosive/
- Flammable

- Chemicals stored in sealed containers
- Log book for removal of chemicals from storage
- Prohibition of naked flames/ignition sources
- Refrigerator, freezers and fridge-freezers are spark proof (Lec standard) where required
- Fire retardant cabinets in place for chemicals
- Stock take carried out regularly
- New stock is dated when received
- Redundant chemicals to be listed for phased disposal
- Chemicals are not to be stored on floors of window sills
- General supplies e.g. paper towels etc. are not stored in chemical stores
- Good housekeeping ensured to enable safe manual handling and reduce slips, trips and falls
- Removal of waste and forms detailing same (C1) are maintained by Technical staff

Chemical stores

- Chemicals are stored to a prescribed segregation protocol based on the UN system
- Toxics are kept in a locked cupboard in chemical storage area
- Flammable materials are stored in flame-proof cabinets in chemical stores
- Small volumes of Solvents are kept in metal cabinets in storage areas in labs
- Incompatible chemicals are stored separate from each other
- Flammable gases are stored outside and piped into building

Cleaning Chemicals

- Toilet cleaners etc. are stored in designated areas
- Employees are instructed to read labels and adhere to the safety precautions prescribed

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Transport of Chemical Agents/Substances

Risks:

- Exposure to chemicals

Control Measures:

- PPE such as white lab coat and safety glasses worn and students are supervised
- Gloves are worn where necessary
- Hazardous substances are transited in a suitable container
- COP for liquid nitrogen and cryogenics in place

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Chemical Waste/Disposal

Please refer to the Chemical Safety Manual (available in the Appendices)

- **Solid waste** e.g. contaminated gloves, paper towels, cotton wool, , flasks and disposable pipettes etc.
- **Liquid waste** e.g.
- **Sharps** e.g. broken glass, pipettes, scalpel blades, small glass vials, tips and ampoules, sharp pieces of metal
- **Mixed wastes** e.g. Waste containing solvents or chemicals

The following bags/containers are used in the School of Chemical & Pharmaceutical Sciences:

Yellow	Contaminated (hazardous) waste
Black	Uncontaminated waste

- **Black Bags**
Black bags are used for uncontaminated waste such as instrument printouts and paper which has not come into contact with blood. These are incinerated. No glass or sharps must be placed in these.
- **Sharps Container**
All sharps (including broken glass, needles) must be placed in the 'Sharpak' containers provided. Do not overfill the containers as this makes it impossible to close them in a safe manner. These are incinerated.
- **Glass**
Large items of used uncontaminated glass are placed in a container for collection by a General Operative. Cardboard containers are used for broken glass also.

Risks:

- Cuts from sharps e.g. pipettes, slides etc.
- Incorrect storage of waste materials
- Contamination
- Spillages, slips, trips and falls
- Accumulation of materials on benches, floors etc. leading to slips, trips and falls

Control Measures:

General

- Contaminated waste is placed in an approved UN biohazard bag or sharps bin
- Approval form completed and signed by laboratory supervisors and the Head of School before disposal
- Hazardous waste is tracked by the School
- All waste chemicals are disposed of using an accredited disposal company and the C1 cert is retained by Technical staff
- Waste is stored in labelled bins in a designated area until removal
- A copy of documentation from the waste management company is kept on file in the School
- When purchasing chemicals regard should be paid to how waste will be disposed of. Volumes purchased should be kept to a minimum to prevent the build-up of surplus chemical for disposal.
- Waste chemicals must be labelled with the chemical name(s), concentration and hazard warning label as well as the name of the person responsible for production/disposal of the waste.

- Flammable wastes should be stored in a flammables cabinet
- Do not dispose of hazardous waste down the drains
- Avoid mixing heavy metal waste and used oil with waste solvents
- Do not mix aqueous waste with organic solvent- based waste
- Paper, gloves, cardboard, and other solid materials must not be mixed in with liquid wastes
- Hazardous waste must not be allowed to accumulate in labs. Arrange for disposal with the School of Chemical & Pharmaceutical Science on a regular basis
- Non hazardous chemicals such as buffers may be washed down the drain
- Chemical waste can be mixed only if the chemicals are compatible and will not result in a hazardous reaction

Segregation of Wastes

Wastes for disposal should be divided into the following categories:

- Neutralised waste
- Chlorinated solvents
- Non-chlorinated solvents
- Mercury wastes
- Oxidizing agents
- PCB wastes
- Reactive chemicals
- Waste oil
- Wastes with heavy metal contamination

The proper segregation of waste chemicals is essential to promote safe storage of those chemicals as well as to facilitate the economical disposal of the chemicals. The list in the Appendices sets out potentially incompatible wastes, waste components, and material along with the harmful consequences of mixing those materials together. This list does not include every possible hazardous chemical reaction, but should be used as a guide. The list indicates the potential consequences of the mixing of a **Group A** material with a **Group B** material. The lists of chemicals in Groups A therefore should be kept separate from those chemicals in Groups B:

Avoiding smells from drains:

- Much distress can be caused by smells from drains due to volatile solvents and smelly substances entering the drains.
- Please think about what is going down your drain - especially drains in fume-hoods as you may be unaware of the smell that is escaping.
- Technical staff should make sure that sink and drain traps are refilled regularly with water to prevent drain odours escaping
- No flammables that could cause fire or serious environmental damage are allowed into the drainage system

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Fumehoods/Fume Cupboards

Risks

- Exposure of staff/students/users to hazardous substances because of incorrect use, fan failure, filter blockage, spillages, accumulation of materials in the fumehood, etc.

Control Measures

- Staff (and students where it is deemed appropriate) are trained in the use of the fumehood
- Students receive safety induction from lecturers and a safety laboratory manual
- Risk Assessments are completed for hazardous tasks carried out in the fumehood: indicated in the CRA
- All incidents, including defects, are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory
- Fumehoods are classified and given a hazard use rating in accordance with this table:

FUME CUPBOARD HAZARD RATING SCHEME		
HAZARD RATING*	Exposure Limit (ppm or g/m ³)	Minimum Face Velocity (m/sec.)
Class 1 - Slight	Over 100	0.4 - 0.6
Class 2 - Moderate	5 – 100	0.5 - 0.75
Class 3- High	Under 5	0.7 - 1.0

** Note: This rating may be revised with the issue of the new British Standard for Fumehoods/Cupboards*

- For the above classification scheme to work, it is necessary to know the face velocity of a particular fumehood, in order that its classification can be assessed. (This is measured with an anemometer, which should be available in the School). Once this has been done, a notice can be affixed to the front and side of the fumehood, indicating its average face velocity at various sash heights, together with an indication of some of the substances which can be used therein to give a general indication to staff of its suitability for different categories of hazardous substances.
- It must be possible to close the sash quickly without any risk of disturbing the apparatus within the fumehood.
- The sash opening is not set above that at which the face velocity has been measured
- Air flow meters and fan failure warning devices are incorporated into each fumehood
- The sash (usually 50cm) shall be kept closed at all times except during set up procedures
- Hazard warning signs are posted in the laboratory when hazardous operations are in progress
- The rate of release of toxic or flammable vapours is minimised by experimental design or by the use of reduced amounts of reagents
- All fumehoods conform to latest BS-EN specification and are maintained to the same standard
- Face velocities at the fumehood entrance, at maximum opening, shall be tested regularly, recorded and should be no less than 0.5m/sec averaged out over the opening. (Ensure that the supply of air to the room is also in excess of the total exhaust of all hoods plus the general room exhaust)
- A preventative maintenance programme is carried out by the School in conjunction with the DIT Buildings Office. The programme covers e.g. fan face velocity testing, containment testing, electrical supply, and motor and filter conditions (where appropriate). Replacements/repair is carried out as soon as possible.
- In case of fire in the fumehood, the fumehood must be turned off
- No explosive or potentially explosive materials are used in fumehoods unless specifically designed or modified for this purpose. Impact grade screens and other safety protective devices must be in place where there is any doubt
- No work is carried out in a fumehood that is used or rated as a ventilated storage cabinet (i.e.

- airflow <0.4mls) or has unnecessary equipment stored within
- Fumehoods are not used as a store for chemicals and no accumulation of chemicals occurs therein
 - The laboratory technician or researcher involved ensures the fumehood is suitable for the chemicals being used e.g. volatile oxidants, Perchloric acid or perchlorates. Hoods designated for these chemicals shall be clearly marked
 - Spillages in the fumehood are cleaned up immediately using the correct procedure by a competent staff member
 - Fume cupboards are never used as ventilated storage areas for chemicals. The proper functioning of fume hoods depends on a free flow of air through the unit and bottles, boxes, and equipment prevent this from occurring. (If chemicals *must* be stored, install ventilated shelves beneath the fumehood)
 - Do not block the area at the back or the front airfoil with bench liner material or other objects
 - Apparatus located within the fumehood shall be raised to allow free air passage under it e.g. via legs or using blocks.
 - Factors that may adversely reduce the efficiency of the cupboard e.g. location near a door, passing traffic, incorrect sash position, storage of materials and equipment inside, use of centrifuge, hot plate or heat sources etc. must be considered
 - After use:
 - Correct shutdown is carried out
 - The fan is run with the sash closed for a suitable period before switching off fumehood
 - All services are turned off and all substances/reagents returned to their designated storage area
 - All apparatus is removed and cleaned before replacement in designated area
 - If energy conservation is necessary to areas where fumehoods are working, it may be necessary to retrofit them with HOPEC (Hand Operated Positive Energy Control) sashes which ensures optimum hood efficiency
 - Staff are trained in manual handling and apply their training

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Nuclear Magnetic Resonance (NMR)

Please refer to the School COP for NMR.

Risks

- NMR Equipment
 - 3 phase electricity supply
 - High Magnetic field
 - SDE
 - Cryogenic Gases
 - Pressurised Gases (0.35 bar)
 - Manual handling
- NMR solvents

- Electrocution
- Asphyxiation as a result of exposure to gases
- Severe burns as a result of contact with cryogenic gases
- Manual handling as a result of refilling gas containers
- Musculoskeletal disorders, eye strain, stress, muscular fatigue

Control Measures

- NMR equipment is installed, commissioned and tested in accordance with method statement and risk assessment provided by Bruker. (Ref Rev 2 Bruker :R.W.Munn, Feb 2004)
- NMR is maintained and used in accordance with the requirements of the manufacturer
- Magnet and NMR machine is CE marked
- 5 Gauss line (Chain posts) indicates delineated area where magnetic field may interfere with pacemakers, magnetic cards etc. This is signed
- Organic waste is collected in a waste solvent bottle for disposal in accordance with the COP for waste solvents
- Gas (O₂) detection system and alarm in place
- Code of practice on the safe transport of cryogenic materials in place
- All NMR deuterated solvents are used in small volumes
- Only a qualified electrician services and repairs the electricity supply
- All sample preparation takes place in the fume hood provided
- Copies of SDS are available
- DSE equipment is provided with good screen definition & a range of adjustments that ensure user comfort
- Fully adjustable DSE chair at DSE workstation desk are provided, Significant users provided with adequate breaks from the work
- Only qualified staff members operate machine (must be on approved list). Only authorised personnel permitted to enter facility
- All incidents (cuts, lacerations, punctures etc. of the skin) are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed.
- Trained first aiders and a first-aid kit are available in the laboratory
- Students and users are instructed and supervised in the use of sharps/instruments e.g. razor blades, scalpel blades, scissors etc.
- Students receive safety induction from lecturers and a safety laboratory manual

Further Actions Required:

- Chipped, damaged, heated and short NMR tubes to be taken out of circulation
- New location for 200 litre dewar required due to arrival of LCMS which will be located in room

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Graphite Furnace Atomic Absorption

Risks

- Fire from heated chamber
- Electrical: risk of electric shock and subsequent serious injury (possible cardiac defibrillation) from GTA 100 which generates currents of 30 – 40mA)
- Chemical exposure (fumes) from heating chamber which may be toxic or corrosive
- Injuries as a result of carousel protruding out

Control Measures

- All incidents are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed.
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Students are instructed on the use of the instrument prior to use and instructed not to put any part of their body over the heating chamber when instrument is in use
- Instrument is serviced and service records are available in G37
- Use by staff and students is minimal
- Area around instrument is kept tidy allowing access at all times
- GTA 100 contained in sealed box with separate power supply
- Only a qualified electrician services and repairs the electricity supply
- Copies of SDS are available where required
- Only qualified staff members and students operate machine
- The GTA and Argon gas must be turned off after instrument use

Further Actions Required:

- Extraction hood should be reengineered to be positioned behind heating chamber not above it

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Atomic Absorption

Risks

- Fire
- Gas: Risk of explosion from leaked acetylene if gas tap left open. Acetylene can form explosive mixture with air. May decompose violently at high temperature and/or pressure or in the presence of a catalyst
- Asphyxiation from acetylene gas
- Burns to body especially face from flames
- Biological exposure as a result of use of/contact with bovine serum

Control Measures

- All incidents are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Instrument is serviced and service records are available in G37
- Correct storage of all biological agents
- Use by staff and students is minimal
- Area around instrument is kept tidy allowing access at all times
- Only qualified staff members and students operate machine
- Students instructed on the use of the instrument prior to use and instructed not to put any part of their body over the upright guard when flame is lit
- Acetylene Gas Detection system installed on the wall above and to the left of the instrument and calibrated, alarm will sound upon detection of acetylene
- Upright guard installed on top of instrument to allow heat and vapours vent to extraction system. Extraction hood above instrument connects to laboratory ventilation system
- Flame guard on front of instrument will extinguish flame if opened during analysis
- Gas for instrument only turned on when students ready to analyse samples
- Gas supply **must** be turned off after instrument use

Further Actions Required:

- Extraction hood should be reengineered to be positioned behind flame not above it

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Gas Chromatograph

Risks

- Fire as a result of FID detector
- Electrical: risk of electric shock and subsequent serious injury during maintenance
- Chemical exposure from use of solvents and aliphatic hydrocarbons
- Burns as a result of hot injector port and oven
- Leak of hydrogen: explosion

Control Measures

- Hydrogen gas leak detection system in place
- All incidents are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Heat resistant glove provided for maintenance to injector port.
- Students are instructed on the use of the instrument prior to use
- Instrument is serviced and service records are available in G37
- Area around instrument is kept tidy allowing access at all times
- Only qualified staff members and students operate machine

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Gas Chromatography Mass Spectrometer (Saturn 4D)

Risks

- Fire as a result of high temperatures of manifold on Mass Spectrometer and from oven
- Electrical: risk of electric shock and subsequent serious injury during maintenance/repair
- Chemical exposure from use of solvents
- Burns as a result of contact with oven

Control Measures

- All incidents are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Students are instructed on the use of the instrument prior to use
- Instrument is serviced and service records are available in G37
- Correct storage of all chemicals used
- Area around instrument is kept tidy allowing access at all times

- Only qualified staff members and students operate machine
- The Helium gas **must** be left on at all times to preserve the column

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Gas Chromatography Mass Spectrometer (Saturn 2000)

Risks

- Fire as a result of high temperatures of manifold on Mass Spectrometer, purge and trap equipment and from oven
- Electrical: risk of electric shock and subsequent serious injury during maintenance/repair
- Chemical exposure from use of solvents
- Burns as a result of contact with oven

Control Measures

- All incidents are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Students are instructed on the use of the instrument prior to use
- Instrument is serviced and service records are available in G37
- Correct storage of all chemicals used
- Use by staff and students is minimal
- Area around instrument is kept tidy allowing access at all times
- Only qualified staff members and students operate machine
- The Helium gas **must** be left on at all times to preserve the column

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Gas Chromatography (GC) 3400CX

Risks

- Fire as a result of FID detector
- Electrical: risk of electric shock and subsequent serious injury during maintenance
- Chemical exposure from use of solvents and aliphatic hydrocarbons
- Gas risk as a result of hydrogen
- Burns as a result of hot injector port and oven

Control Measures

- Waste produced is in small volumes
- All incidents are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Heat resistant glove provided for maintenance to injector port.
- Correct storage of all chemicals used
- Students are instructed on the use of the instrument prior to use
- Instrument is serviced and service records are available in G37
- Use by staff and students is minimal
- Area around instrument is kept tidy allowing access at all times
- Only qualified staff members and students operate machine

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Ion Chromatograph (HPLC)

Risks

- Fire as a result of high temperature of oven
- Electrical: risk of electric shock and subsequent serious injury during maintenance/repair
- Chemical exposure from use of solvents: corrosive and irritant chemicals used
- Burns as a result of contact with oven

Control Measures

- All incidents are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Students are instructed on the use of the instrument prior to use
- Instrument is serviced and service records are available in G37
- Correct storage of all chemicals used

- Use by staff and students is minimal
- Area around instrument is kept tidy allowing access at all times
- Oven contained inside housing in the unit
- Only qualified staff members and students operate machine

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Capillary Electrophoresis

Risks

- Electrical: risk of electric shock or electrocution as a result of high voltage used and during maintenance/repair
- Chemical exposure from use of solvents
- Gas exposure as instrument uses nitrogen

Control Measures

- All incidents are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed
- Trained first aiders and a first-aid kit are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- All staff and students wear PPE such as laboratory coat and safety glasses
- Students are instructed on the use of the instrument prior to use
- Instrument is serviced and service records are available in G37
- Correct storage of all chemicals used
- Use by staff and students is minimal
- Area around instrument is kept tidy allowing access at all times
- Only qualified staff members and students operate machine
- Plastic cover is present to protect user from high voltage during operation. Equipment must be shut down before this plastic cover is raised

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Sharps, Surgical Blades, Syringes etc.

Risks

- Cuts, lacerations and punctures of the skin from careless handling, usage or disposal
- Infection from hazardous chemicals or organisms entering the body

Control Measures

- All incidents (cuts, lacerations, punctures etc. of the skin) are reported to the laboratory technician or lecturer (who are trained in first-aid) and an incident report form completed.
- Trained first aiders and a first-aid kit are available in the laboratory
- Students and users are instructed and supervised in the use of sharps/instruments e.g. razor blades, scalpel blades, scissors etc.
- Students receive safety induction from lecturers and a safety laboratory manual
- Surgical scalpels are held only by the handle and stored in a safe place
- Pliers are used to remove corroded scalpel blades or tight fitting hypodermic needles from a holder or syringe. (Eye protection shall be worn when doing this as scalpel blades are very brittle and easily fragment under force)
- Surgical scalpels are held only by the handle and kept in a safe place
- Scalpel blades are held in forceps/pliers when being inserted into the handle or removed from it. New blades are pushed or pulled away from the body, not towards it.
- New needles and sharps are handled with the protective covering in place. Caps are not replaced on used needles. Users dispose of needles directly to the sharps container.
- Syringes and syringes without a needle attached must all go into a sharps container. Razor blades, lancets, scalpels, broken contaminated glassware and any other contaminated items that could cut or pierce the skin must also be placed in a sharps container
- Sharps containers for disposal of these items should be conveniently located and easily accessible in all work places in which sharps are used
- Needle caps are left in place until use
- Scissors are used instead of blades where possible when cutting
- Hands are not used to retrieve needles from vessels, instead the container is emptied onto a flat surface, and forceps are used to transfer needles
- Sharpness of a blade is never tested with a finger. Knives are held by the handle away from the edge of the bench and attempts to catch a falling blade are not permitted.
- A designated storage area for all sharp instruments is available
- Suitable storage is available for safety pins
- Blades are wrapped/sheathed and stored appropriately
- Designated puncture-resistant sharps containers are used for the disposal of all needles, blades and other sharps
- Sharps are never disposed of with regular waste or in regular rubbish bags
- Needles and syringes are rendered unusable by destroying them with pliers, and placing them into the sharps container.
- Sharps containers comply with the latest BS EN Specification for Sharps Containers.
- Sufficient sharps containers are available in relevant areas/laboratories.
- Sharps containers are sealed when three-quarters full and disposal is arranged by the School.
- Broken glassware and sharps that may be contaminated with infectious materials should be cleaned up using mechanical means, such as brush and dust pan, tongs, or forceps. Broken glass should not be picked up by hand
- Contaminated needles must not be bent, recapped, or removed unless there is no feasible alternative

NOTE: Sealed, robust sharp boxes, duly marked may be disposed of in the central skip.

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Bunsen Burners

Risks

- Burns from contact with hot Bunsen Burner and/or hot tubing
- Gas leak from gas left on, damage to tubing etc.
- Fire from naked flame
- Back burn

Control Measures

- Central gas 'shut off' available
- All incidents (burns, defects etc.) are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory
- Students receive safety induction from lecturers and a safety laboratory manual
- Bunsen Burner user wears a laboratory coat, and long hair is tied back etc.
- Prior to using Bunsen Burners the gas tubing is checked for damage and the ends are securely fixed onto the gas tap and the burner inlet. Damaged tubing is removed from use immediately
- Flammable materials in containers on work benches near Bunsen Burners must not exceed 50ml, and must be in covered containers at a distance at least 30cm from a lit Bunsen Burner or gas burner.
- Lit Bunsen Burners are never left unattended. They are turned off before leaving the laboratory or moving to another area of the laboratory
- When the Bunsen Burner is being used to sterilize equipment that has been dipped in alcohol, the excess alcohol must be allowed to run off the equipment prior to inserting it into the flame
- Because as flames may not be visible in strong sunlight, lights can be dimmed or blinds pulled in order to see the flame more readily
- Bunsen Burners are turned off or turned to the pilot (yellow) flame setting when not in use
- Vessels to be heated over gas burners are securely positioned on tripods or similar apparatus
- Heating of liquids is permitted in glass or Pyrex vessels only. The procedure is carried out in the fumehood where vapours/fumes are likely to be released. Flammable liquids are not heated to a temperature greater than their flashpoints
- Heated containers are not handled until they have cooled down
- Bunsen Burners can remain hot for a period of time. As a result, they must be stored safely so that others are aware they are still hot. Bunsen Burners should always be handled by the base and not the neck
- Bunsen Burners must be at a sufficient distance from the gas supply point and line that they do not pose a risk of melting or igniting same

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Rubber and Plastic Tubing

Risks

- Putting rubber tubing onto glassware
- Sudden release of gas or liquid resulting from defective tubing or incorrect securing of tubing to nipples/taps, which can lead to fire or explosion
- Release of hot liquids or mains water under pressure
- Various personal injuries
- Damage to property and structures
- Fire
- Aerosols

Control Measures

- All incidents (burns, defects etc.) are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory
- Students and users are instructed, trained and supervised in the use of Bunsen Burners, rubber and/or plastic tubing
- All rubber and plastic tubing is checked periodically for cracks or other damage, prior to use. Replacement is made promptly where necessary
- Checks are made to ensure gas is completely turned off even if no flame is visible as fire can still be present in a Bunsen Burner and the rubber tubing hot
- Rubber tubing is not used on permanent installations connected to laboratory services. Clear Neoprene plastic tubing is used instead
- Excessive lengths of tubing which may lose their identity or which may trail and pose tripping hazards or which may trail into hot/corrosive areas are not used/permitted
- Tubing for use with organic solvents is chosen carefully. The suitability of material is checked for each solvent.
- Tubes to filter pumps and cooling circuits are secured by a jubilee clip fitting. The tube carrying the outflow is firmly anchored in the drain and free from danger of 'kinking'
- Where aerosols could be created, the Bunsen Burner must be used in the fumehood
- Students receive safety induction from lecturers and a safety laboratory manual
- Fire blanket available in lab
- Running water and first-aid kit available for burns
- Appropriate PPE used/worn: lab coat, safety glasses, gloves
- Designated lockers for personal belongings to reduce clutter
- Lab safety rules communicated and strictly adhered to
- Signage in place re unauthorised access to lab
- Emergency plans in place
- Restricted access: students only permitted when staff are present

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Laboratory Refrigerators, Freezers & Fridge-Freezers

Risks

- Reactions between chemicals/substances/materials where they are incompatible and stored together
- Release of vapours/fumes from chemicals/substances/materials
- Contact with materials due to overloading, inadequate labelling, incorrect storage/sealing of chemicals/substances/materials

Control Measures

- All staff are reminded of dangers of using domestic fridges to store solvent samples
- Samples are labelled and sealed in fridge
- Refrigerators, freezers and fridge-freezers are all 'Lec' or X-rated laboratory refrigerators, which are spark-free, lockable, have a temperature display, an alarm and automatic defrost
- Chemicals/substances/materials are stored correctly and refrigerators, freezers and fridge-freezers are not overloaded
- Inventory of chemicals in fridge maintained on fridge
- Chemicals/substances/materials stored are adequately labelled with labels stating the name, date of preparation/acquisition and person responsible with a water-resistant marker/pen
- Food and drink is not permitted in laboratory refrigerators, freezers and fridge-freezers, and signage is displayed on the outside of the units to this effect
- Defects are reported to management in the School immediately
- When power is due to be turned off, the DIT Buildings Office send a communication and back-up generators are used to power laboratory refrigerators, freezers and fridge-freezers
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Mercury Thermometers

Risks

- Poisoning as a result of absorption through the respiratory tract or through unbroken skin. It has cumulative effects
- metallic taste, nausea, abdominal pain, vomiting, diarrhoea and headache as a result of high exposure concentrations
- Severe nervous disturbance, insomnia, loss of memory, irritability and depression as a result of chronic exposure (from continual exposure to small concentrations)
- Loosening of teeth, dermatitis and kidney damage as a result of severe prolonged absorption
- Chemical reactions e.g.
 - With ammonia to produce an explosive solid
 - It can cause severe corrosion problems because of its ease in forming amalgams

Control Measures

- Mercury is never handled
- Thermometers are being phased out and are not replaced when damaged/broken

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Spillages

Risks

- Contact with materials
- Slips, trips and falls, and increased risk of exposure as a result
- Environmental damage

Control Measures

- Please see Chemical Safety Manual

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Microscopes

Risks

- Eye infection, eye strain from use
- Cuts from broken slides
- Infection, allergies from multiple users/shared use
- Manual handling injuries as a result of moving microscopes
- Musculoskeletal disorders from prolonged use with poor posture
- Asbestos slides

Control Measures

- Asbestos is sealed on slides
- Glasses, contact lenses worn where necessary, slide image can be magnified as much as required. Eye pieces can be adjusted separately. When viewing slides at high magnification, students are instructed to start with the lens close to the slide and focus by moving the slide away from it
- Adequate lighting provided in the laboratory
- Spillages are cleaned up immediately
- Surfaces are wiped down regularly
- Good posture adopted and stool etc. adjusted to achieve a comfortable seating position. Elbows and wrists placed close to microscope
- Regular breaks taken and adequate time is given to students so no rushing is required
- All incidents (cuts, defects etc.) are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory
- Students and users are instructed and supervised in the use of microscopes
- Students receive safety induction from lecturers and a safety laboratory manual
- Staff are adequately trained and are competent in the use of microscopes
- Hand-washing facilities available in the laboratory
- Sterile wipes are available for cleaning the eyepiece of the microscope

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Water Baths

Risks

- Burns and scalding from hot water and steam

Control Measures

- Baths are not left unattended and users must stand and not sit in the vicinity of same
- Water in baths is heated slowly to the desired temperature
- Baths are visually inspected prior to use. Damaged water baths are taken out of use immediately
- Spillages are cleaned up immediately
- Baths are allowed to cool before emptying
- All incidents (cuts, defects etc.) are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory
- Students and users are instructed and supervised in the use of water baths, and do not interfere with or lean over baths
- Materials added to the bath are removed using tongs
- Racks within the bath are not lifted/removed from the bath
- Baths are not overloaded
- Students receive safety induction from lecturers and a safety laboratory manual
- Staff are adequately trained and are competent in the use of water baths
- Hand-washing facilities available in the laboratory

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Hot Plates, Heat Stirrers and Heating Mantels

Risks

- Burns as a result of contact with hot surfaces
- Eye or skin damage as a result of splashing liquid
- Fire as a result of heating materials to high temperatures

Control Measures

- PAT to be carried out as required
- Spillages are cleaned up immediately
- All incidents (burns, defects etc.) are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory
- Students and users are instructed and supervised in the use of hot plates and heat stirrers
- Students receive safety induction from lecturers and a safety laboratory manual
- Staff are adequately trained and are competent in the use of hot plates and heat stirrers
- Hand-washing facilities available in the laboratory

- Hot plates and heat stirrers are visually inspected before each use and damaged units reported to management and taken out of use immediately
- PPE worn includes laboratory coat and safety glasses
- Liquids are heated or stirred in glass or Pyrex vessels only
- Stirrers are turned on only after the container to be heated has been placed onto the plate
- Temperature and rotation speed should be increased gradually to prevent over-heating or splashing
- Flammable liquids must not be heated to a temperature greater than their flashpoints
- If the heating of liquids is likely to release hazardous vapours then the process must be carried out in a fumehood
- Hot plates and heater stirrers are not left unattended when in use
- Ensure that the electrical cable to the unit is not touching the hot plate during use
- Units must be switched off when not in use
- Hot plates must be serviced and maintained in accordance with the manufacturer's instructions
- Hot plates are not handled until they have cooled down. They can remain hot for a period of time. As a result, they must be stored safely so that others are aware they are still hot
- Bunsen Burners must be at a sufficient distance from the gas supply point and line that they do not pose a risk of melting or igniting same

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Glassware

Risks

- Cuts, from damaged or broken glassware e.g. from forcing tubing, teats or bungs into glass tubing, pipettes or condensers which break
- Cuts from flying or ejected pieces of glassware
- Exposure to hazardous substances on contact with containers / receptacles
- Burns from contact with heated glassware

Control Measures

- Spillages are cleaned up immediately
- All incidents (cuts, burns, defects etc.) are reported to the laboratory technician or lecturer (who is trained in first-aid) and an incident report form completed
- Trained first-aiders, a first-aid kit and an eyewash station are available in the laboratory
- Students and users are instructed and supervised in the use of glassware
- Students receive safety induction from lecturers and a safety laboratory manual
- Staff are adequately trained and are competent in the use of glassware
- Care is taken in the storage and washing of glassware and specific glassware racks are available in the wash-up area in laboratories

- Hand-washing facilities available in the laboratory
- Use plastic as an alternative to glassware whenever possible
- Glassware is visually inspected before use, glassware with cracks, breakages, scratches, chipped etc. is reported to the laboratory technician or lecturer immediately and the glassware is not used
- Glassware is not stored near the edge of work benches in the laboratory
- Great care is taken when using/handling glassware including:
 - Inserting pipettes into pipetting aids or Pasteur pipettes into teats
 - Attaching glass to or removing glass from rubber or plastic tubing
 - Removing "frozen" stoppers from glass bottles
 - Breaking glass tubing
 - Washing up glassware
 - Handling broken glassware
- When handling glassware force or excessive pressure should not be applied
- When inserting pipettes into pipetting aids or Pasteur pipettes into teats; attaching glass to rubber or plastic tubing; or removing "frozen" stoppers from glass bottles, glassware should be held in a cloth to help prevent slipping and hands kept as close together as possible
- When fitting glassware to tubing, water or glycerol may be used and the plastic tubing softened by brief immersion in hot water
- Glass vessels under vacuum should be enclosed in plastic or wire mesh to prevent fragments being scattered if implosion occurs
- Hot glassware is treated with care and put in a place of safety so that no individual can access it until it has cooled
- Ground glass connections are lubricated before assembling and disassembled immediately after use
- Flasks or containers are never stoppered when hot
- Where a glass stopper seizes, the container is never heated
- Running is not allowed while carrying glassware
- Broken glassware is carried in suitable cages/trays and placed in the sharps container and never the general waste bin.

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

Hazard: Ultra Violet Light Sources (UV light box: high intensity) (Photolysis apparatus)

Risks

- Burns to skin
- Eye damage: burns to cornea resulting in temporary blindness

Control Measures

- Spillages are cleaned up immediately

Control

- Stored in blackened out fumehood
- Project risk assessments completed
- Only used when students are continuously supervised
- A UV face shield is worn when using the light box
- Long sleeves and gloves are worn.
- Risk is reduced because exposure times are low/short

Risk: H/M/L:

With current controls: L

With actions applied: L

Person(s) Responsible: Head of School, Staff and Students of the School of Chemical & Pharmaceutical Sciences

Target Date/Status: Ongoing

APPENDICES

*******Please see School of Chemical & Pharmaceutical Sciences website for all Codes of Practice and the Safety Manuals*******