School of Electrical and Electronic Engineering

Safety Arrangements & Risk Assessments

14 September 2021

OLLSCOIL TEICNEOLAÍOCHTA BHAILE ÁTHA CLIATH
TU DUBLIN
TECHNOLOGICAL UNIVERSITY DUBLIN

IMPORTANT: The Technological University Dublin (TU Dublin) City Safety Statement 2020/2021 now supersedes all School/ Function Safety Statements. This document enclosed therefore ONLY covers the School/ Function safety arrangements and risk assessments. Please refer to the TU Dublin City Safety Statement for other information

Safety Arrangements & Risk Assessments Document Record	
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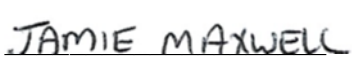
IMPORTANT NOTE:

This document has been prepared by the School of Electrical and Electronic Engineering and facilitated by the CEBE Health and Safety Officer. It is based solely on the information provided to the author(s) on the date of completion. If there is any inaccuracy, misstatement, omission or any other error of whatever nature contained herein, it should be reported immediately to the Head of School and the CEBE Health and Safety Officer. This document is to be reviewed annually and in the event any changes occur within the School.

_____
Head of School
Date:

_____
Edel Niland
Health and Safety Advisor

Date:



Name Jamie Maxwell
Health and Safety Officer

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SCHOOL/FUNCTION CONTACT DETAILS

Role	Name	Location	Email	Telephone Extension Number
Head of School/Function	Michael Conlon	CQ 414	michael.conlon@tudublin.ie	220-5925
Assistant Head of School	Mark Davis	CQ 414	mark.davis@tudublin.ie	220-5930
Assistant Head of School	Keith Sunderland	CQ 414	keith.sunderland@tudublin.ie	220-5978
Assistant Head of School	Catherine Deegan	CQ 414	catherine.deegan@tudublin.ie	220-6118
Assistant Head of School	Charlie Cullen	CQ 414	charlie.cullen@tudublin.ie	220-5929
Structured Lecturer	Joseph Kellegher	CQ 414	joseph.kellegher@tudublin.ie	220-5945
School/Function Administrator	Adrienne Byrne	CQ 414	adrienne.byrne@tudublin.ie	220-5022
School/Function Administrator	Sinead Byrne	CQ 414	sinead.byrne@tudublin.ie	220-5950
School/Function Administrator	Sharon Byrne	CQ 414	sharon.byrne@tudublin.ie	220-6128
School/Function Administrator	Thomaskutty Kooplikattayil	CQ 414	thomaskutty.kooplikattayil@tudublin.ie	220-8063
School Administration General			seee.admin@tudublin.ie	220-6165 220-5949
Nominee(s) on College Safety Team	Mark Davis	CQ 414	mark.davis@tudublin.ie	220-5930
School First-Aiders	Andrew Dillon	CQ-347	andrew.dillon@tudublin.ie	220-6712
School First-Aiders	Tom Fallon	CQ-514	tom.fallon@tudublin.ie	220-6213
School First-Aiders	Thomas Freir	CQ 414	thomas.freir@tudublin.ie	220-5937
School First-Aiders	Paul Marah	CQ 414	paul.marah@tudublin.ie	220-5953
School First-Aiders	Michael McDonald	CQ 414	michael.mcdonald@tudublin.ie	220-5954
School First-Aiders	Ciaran O'Driscoll	CQ 414	ciaran.odriscoll@tudublin.ie	220-5967
School First-Aiders	Finbarr O'Meara	CQ-LG02b	finbarr.omeara@tudublin.ie	220-6220
Elected Staff Safety Representative				

Please see for full listing of all School staff: https://www.dit.ie/electricalelectronicengineering/staff/

Emergency Contact Information and Emergency Services Contact Details

TU Dublin City Internal Contact Numbers

Central Switchboard	(01) 220 5000	
Chaplaincy	(01) 402 4308	
Security Control Centre 24 hour (Orchard House, Grangegorman)	(01) 402 4209 (01) 402 4206	Internal Extension

	(01) 8385892	2999
Student Counselling Service	(01) 402 3352	
Employee Assistance Programme (VHI Corporate Solutions)	Freephone 1800 995 955 (24 hour/ 7 days a week/ 365 days a year)	
Estates Helpdesk	(01) 220 7666	
Estates Officer	(01) 220 5034 0872250015	
Health & Safety Advisor	086 3891080	
Public Affairs Office	(01) 402 7138	
Student Health Centres: *Rathdown House* *Aungier St.*	 (01) 402 3614 (01) 402 3051	
FRONT DESK/RECEPTION CONTACTS		
AUNGIER STREET CAMPUS		
Aungier Street Entrance	(01) 402 3061	
Bishop Street Entrance	(01) 402 7004	
BOLTON STREET CAMPUS		
Kings Inn Street Entrance	(01) 402 3607	
E-Block	(01) 402 3724	
Linenhall	(01) 402 4000	

Beresford Street	(01) 8727157	
GRANGEGORMAN CAMPUS		
Security Control Centre (Orchard House) 24 HOUR	(01) 402 4209/ (01) 402 4206/ (01) 8385892	Internal Extension 2999
Rathdown House	(01) 402 4270	
Park House	(01) 8385108	
	(01)	

External Emergency Contact Numbers

Emergency Services	112/999 (If dialling from a landline phone you may need to dial "0" for an outside line)
Hospital	Northside (01) 803 2000 Mater Hospital Southside (01) 410 3000 St. James Hospital

Dublin City Council	(01) 222 22 22	
Garda Síochána	**Northside:** Bridewell: 01 666 8200 Mountjoy Square: 01 666 8600 Fitzgibbon Street: 01 666 8400 Store Street: 01 666 8000	**Southside:** Kevin Street: 01 666 9400 Pearse Street: 01 666 9000
Gas Networks Ireland 24-hour Emergency	1850 20 50 50	
ESB Fault Emergency Line	1850 372 999 Fault and Emergency: 021 4537000 (open 24 hours, 7 days per week)	
Health and Safety Authority	1890 289 389	
Samaritans	1850 60 90 90	
Environmental Protection Agency	1890 33 55 99	
Employee Assistance Programme (VHI Corporate Solutions)	Freephone 1800 995 955 (24 hour/ 7 days a week/ 365 days a year)	
National Poisons Information Centre	**Members of Public**: +353 (1) 809 2166. (8.00 a.m. to 10.00 p.m. 7 days a week)	

INTRODUCTION & SCOPE

The scope of our operations include:

- Education in Electrical and Electronic Engineering from Level 6 to Level 10, including the following:
  - Electrical apprentice education at Phase 4 and 6
  - Undergraduate education at Levels 6, 7 8
  - Masters and PhD Programmes at Levels 9 and 10
  - Research activities in a range of electrical and electronic areas
- This education and research activity is associated with a range of activities:
  - Lectures
  - Laboratory activities
  - Workshop activities
  - On-line learning
  - Laboratory-based and other research
  - Seminars, colloquia and conferences
  - Undergraduate and postgraduate student projects
  - Work Placements
  - Field visits
  - Promotion of STEM to secondary school students
- These activities accommodate students of the School of Electrical and Electronic Engineering and students from other Schools in TU Dublin.

For all Policies and Procedures on a University level see the TU Dublin City Safety Statement. See below bullet points.

- **TU Dublin City Occupational Safety and Health Policy**
- **Identification of Hazards, Assessment of Risks, Precautions**
- **Implementation and Operation: Safety Arrangements and Information Resources, Roles, Responsibility, Accountability, Authority**
- **Duties of the Employer and Employee under the 2005 Act**
- **Responsibilities of Others**
- **Commitment to Legal Compliance**
- **Protective and Preventative Measures**
- **Competence, Training & Awareness**
- **An Emergency or Serious Danger, including First-aid and Fire**
- **Accident & Dangerous Occurrence Reporting and Investigation**
- **Sensitive Risk Groups**
- **Student Placement**
- **Visitors**
- **Out of Hours Access**
- **Health Surveillance, Health Assessment and Medical Fitness to Work**
- **Personal Protective Equipment (PPE)**

DRAFT

- **Workplace Drugs, Intoxicants and Alcohol**
- **Dignity at Work, Anti-Bullying and Harassment**
- **Work-Related Stress**
- **Manual Handling of Loads**
- **Use of Display Screen Equipment (DSE)**
- **Work Equipment**
- **Electrical Safety**
- **Biological Agents**
- **Chemical Agents including Carcinogens and Mutagens**
- **Smoke-Free Buildings**
- **Workplace Transport Safety and Traffic Management on Campus**
- **Driving for Work**
- **Asbestos**
- **Radiation Safety**
- **Trips, Travel and Events**
- **Management of Contractors and Service Providers**
- **Safe Systems of Work**
- **Monitoring, review and continuous improvement**
- **Forms and Records**
- **Organisational Safety Responsibilities**
- **Health and Safety Sub-committee and Safety Team Overview**
- **TU Dublin City Safety Team Organisational Structure**
- **Controlled Document Register**
- **Procedure: Hazard Identification, Risk Assessment and Determining Controls.**
- **Procedure: New Risk Assessments and Safe Work Practice Sheets**
- **Terms of Reference: Health and Safety Sub-committee (Reporting to ORC)**
- **Terms of Reference: Safety Teams (Reporting to the Health & Safety Sub-committee)**
- **Terms of Reference: Allergen Working Group**
- **Terms of Reference: Chemical Safety Working Group**
- **Guidance document for school/Function safety committee**
- **TU Dublin City Accident Report Form**
- **Listing of Health and Safety Related Legislation**
- **Risk Assessments**
- **TU Dublin City – Associated Buildings**
- **Technological University Dublin First Response Procedures for all Campus Users**

EMERGENCY RESPONSE

Action for fire/evacuation warning - The immediate response to fire/evacuation warning for all campus users

- **On suspecting a fire i.e. smelling or seeing smoke**
  - Do not investigate alone; and
  - Alert front desk/reception and wait for further instruction. Prepare to evacuate if necessary.
- **On discovering a fire:**
- Activate the nearest alarm call point or break glass unit, after which;
- Alert the front desk/reception or Emergency Services if possible;
- Fight the fire with the appropriate fire extinguisher **only** if it is safe to do so and you are trained; and
- Follow the evacuation procedure below.

If you hear the evacuation alarm

- Proceed to evacuate without delay, do not wait for further information or instruction;
- If there is time and it is safe to do so, shut down electricity and gas, and close doors and windows;
- Leave the building using the nearest emergency exit;
- Do not use the lift;
- Form a single file on stairways and corridors and leave the centre passageway clear for emergency access;
- If you encounter crowd congestion, smoke or other danger proceed to another exit if possible;
- Disperse from the building and report to the designated Assembly Point; and
- Do not re-enter the building until the "all clear" has been given.

CONTACTING EMERGENCY SERVICES

- Dial 112 or 999 (if dialling from a campus landline phone you may need to dial "0" for an outside line);
- Ask for correct service(s); and
- Give the following information: Your name, telephone number, exact location (TU Dublin Campus building, street, landmarks, Eircode), type of incident, contact details, number of casualties, type of injuries, any hazards etc.

DON'T HANG UP THE PHONE UNTIL THE OPERATOR CLEARS THE LINE

- If dialling 112 or 999 from a campus landline phone, remember to dial "0" first to get an outside line. The dial tone may differ from the usual tone;
- Designate someone to inform the front desk/reception of the situation; and
- Designate a person to go to the front of the building to guide the Emergency Services to the scene.

Evacuation Marshals (ALL EMPLOYEES)

All employees are required to act as evacuation marshals during an evacuation. The main role of an evacuation marshal is to carry out a "sweep/search" of rooms in their area and instruct all occupants to leave the building promptly by the nearest and safest exit and report to the Assembly Point. They

report information about their area to the Incident Controller outside the building. Evacuation marshals are advised not put themselves in any danger while undertaking their duties. The role and duty of an evacuation marshal is covered in Emergency Response Training.

The Assembly Points for TU Dublin – Central Quad and Park House are as follows:

- Park House - Annamoe Road
- Central Quad - Main Pitches

TU DUBLIN (CITY) EMERGENCY FIRST-AID PROCEDURE

ACCIDENT / INJURY/ UNWELL

Front Desk/ Reception Area of Buildings

First-aid kit and automatic external defibrillator (AED) available

First-aid kits located in all kitchens, workshops, and laboratories

CONTACT FIRST-AIDER

- Front Desk/ reception area
- List of trained first-aiders is available health and safety website
- Contact Health & Safety Office for advice 087 9809135/ 087 9809194/ 087 9809131/086 3891080

WORRYING INJURY/ ILLNESS

Requires immediate medical attention

- Arrange transport for the person to their local GP or A&E Department
- Students **ONLY** can attend the Student Health Centres (Mon- Fri 9:00am – 5:00pm)

Southside (Aungier Street) Tel: (01) 402 3051/ Northside (Linenahll) Tel: (01) 402 3614

IF IN DOUBT OF SEVERITY OF INJURY/ ILLNESS

Contact Emergency Services on **112 or 999**
(Note: using a landline you may need to dial **"0"** for an outside line)

SERIOUS INJURY/ ILLNESS

- Dial 112/999 (You may need to dial "0" for an outside line)
- Keep the person comfortable until the ambulance arrives
- A friend/ responsible person should accompany the person to hospital
- Contact the Health & Safety Officer - 086 3891080

FOR ALL INCIDENTS COMPLETE AN INCIDENT REPORT FORM

Forms are available from the front desk and on the health and safety website. When completed, the form should be sent to immediately to the Health & Safety Office

Location of First-Aid Equipment	
First-Aid Kits	First-aid kits are available at the front desk/reception in main buildings. First-aid kits are also available in all laboratories
Automated External Defibrillators (AEDs)	AEDs are available at the front desk/reception in main buildings. A full listing of all AED locations is available on the
Emergency Showers	CQ-T407
Eye-Wash Stations	CQ-516 and CQ-T407 (First-aid kits also contain an eye-wash bottle)

Location of first-aid rooms

These rooms also serve as a rest facility for pregnant women and breastfeeding mothers.

Building	**Room/Area**
Bolton Street	Room 136.1, Ground Floor
Central Quad, Grangegorman	CQ-0372
Park House	PH-LG08
Mountjoy Square	Room G2, Ground Floor
Rathdown House, Grangegorman	Room RD003, Ground Floor

Reporting Accidents/Near misses/Dangerous Occurrences and Hazards

Employees and students are required to immediately inform their Supervisor/Line Manager of any accident/near miss/dangerous occurrence/hazard. A report form must be completed and sent to the Health & Safety Office within 24 hours. Forms are available the Health & Safety website.

Statutory testing – inspection and contractors

Item	Location	Test Frequency	Test Company Details

Specialised training

Specific hazards: chemical, biological, laser, machinery and plat, working at heights, specialised contractors, young person

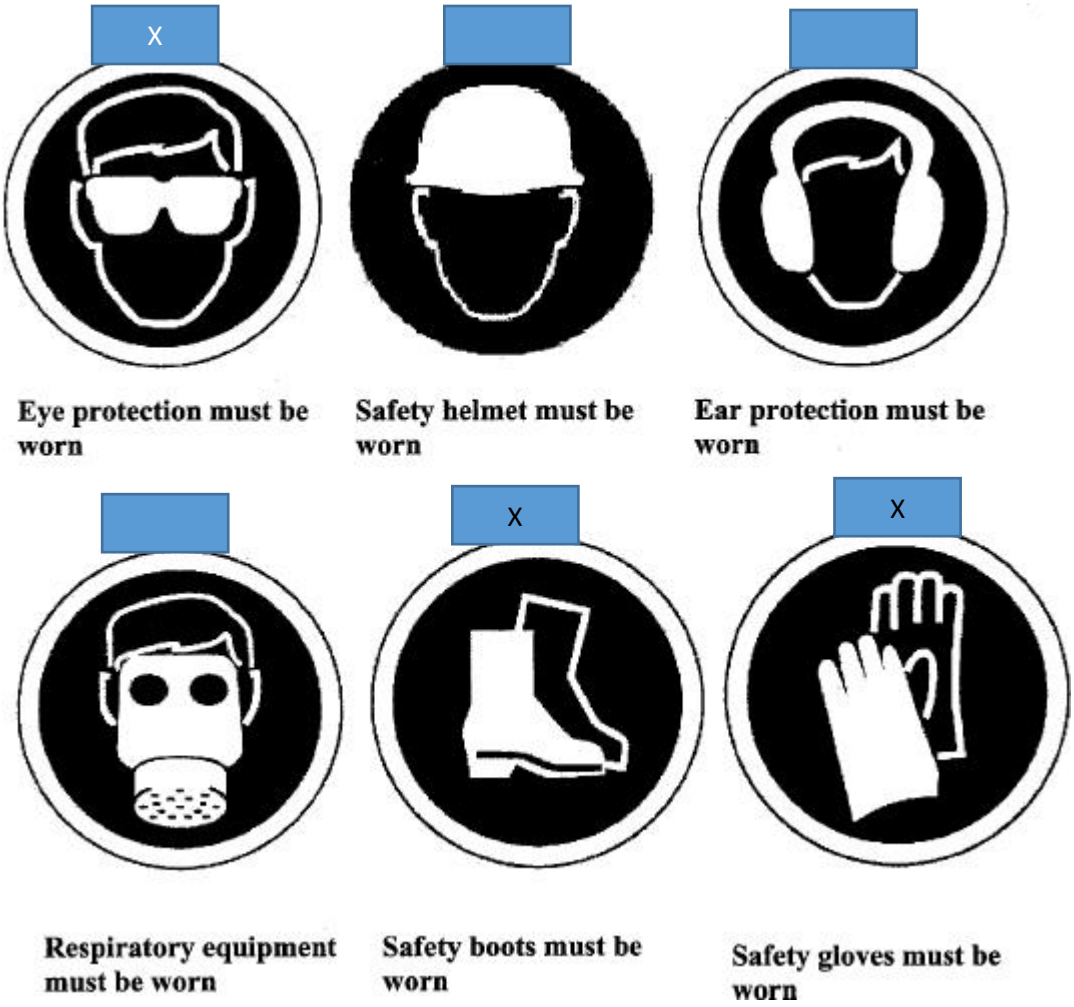
HAZARD CHECKLIST *(please tick yes or no)*	**No**	**YES**	***If YES, please provide details***
Biological agents e.g. Blood/ food/air/ water borne pathogens, hepatitis sharps, clinical waste	X		
Chemicals e.g. solvents, paints, degreasers cleaning products, asbestos, acetylene		X	Photonics laboratory (CQ-LG01) uses acetone, ethanol and methanol for cleaning optical fibres. Ref. 059 Printed Circuit Board Lab (CQ-516) uses ferric chloride etching solution and photoresist developer concentrate in the manufacture of copper printed circuit boards. For details Ref. 030
Lasers		X	Photonics laboratory (CQ-LG01) and Telecommunications Lab (CQ-509) use lasers. For details Ref. 028
Gases (natural gas/ and gases in cylinders)			Photonics laboratory (CQ-LG01) uses argon and nitrogen. For details Ref. 060
Physical		X	
Equipment/Machinery		X	
Electricity		X	
Hand Tools		X	
Heat Sources / High Temperatures / Hot Surfaces		X	
Instrumentation		X	
Manual Handling		X	
Lifting Equipment / Mechanical Aids		X	
Noise		X	
Power Tools		X	
Pressure Systems		X	
Machinery & Plant		X	
Radiation	X		

Vibration	X		
Working at Height (incl. use of ladders)		X	
Human Factors			
Sensitive Work Groups: Pregnant Employees /Students & Nursing Mothers		X	
Young Persons		X	
People with Disabilities		X	
Visitors		X	
Contractors/ Service Providers		X	
Psychosocial e.g. Violence, aggression, stress, bullying, harassment, horse play		X	
OTHER HAZARDS / ANY OTHER RELEVANT INFORMATION :			

Personal Protective Equipment (PPE)

All PPE and safety equipment purchased by the School/Function (or by students at the request of the School/Function) 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 risk assessments. This is further complemented with mandatory signage. PPE shall be provided and worn in designated areas and whilst carrying out specific tasks, based on the risk assessments.



X

Safety overalls must be worn

X

Face protection must be worn

Safety harness must be worn

X

Pedestrians must use this route

General mandatory sign (to be accompanied where necessary by another sign)

Chef uniform	
Laboratory Coat (Howie)	
Safety Shoes	

RISK ASSESSMENTS

A Risk Assessment is simply a careful examination of what, in your work, could cause harm to people, so that you can weigh up whether you have taken enough precautions or should do more to prevent harm.

The School/Function must identify hazards in the workplace, assess the risk to safety and health and control these risks as far as is reasonably practicable.

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 TU Dublin". Hazards may be classified as:

- Physical;
- Chemical;
- Biological;
- Operational; and
- 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.

Risk categorisation – Severity of hazard/injury or consequence of impact/hazard

Severity		Description
Insignificant	(1)	Minor Injury (first aid treatment <3 days lost time).
Minor	(2)	Reportable Injury (>3 days lost), Dangerous Occurrence (little or no damage), Industrial Disease (<7days lost).
Moderate	(3)	Major Injury, Multiple Minor Injuries, Dangerous Occurrence with Damage, Industrial Disease (>7days Lost).
Major	(4)	Fatality, Multiple Major Injuries, Dangerous Occurrence with attendant injury and/or disruption to activities >3days.
Catastrophic	(5)	Multiple fatalities, Dangerous Occurrence with attendant major Injury and/or disruption to activities >7 days.

Risk Categorisation - Likelihood of occurrence

Likelihood		Description
Rare	(1)	Event exposure once during a working lifetime
Unlikely	(2)	Event exposure is once annually
Possible	(3)	Event exposure is once monthly
Likely	(4)	Event exposure is once weekly
Almost Certain	(5)	Event exposure is daily

		Severity				
		1	2	3	4	5
Likihood	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Key

	Risk is acceptable; however risk should be reduced further if this involves minimal cost or effort.
	Risk is broadly acceptable but should be reduced to a low as is reasonably practicable within the following year.
	Risk is intolerable and work must be stopped until the risk is eliminated or reduced

PHYSICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			

001	**Fire**
	
	Emergency Response & Evacuation
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups
	  • young persons
	  • pregnant women
	  • people with disabilities
		• 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
			• Staff trained in Emergency Response Training (ERT)
			• Sufficient fire detection and extinguishing equipment available
			• Firefighting equipment and detection systems maintained and tested
			• Fire and evacuation signage in place
			• Emergency first aid procedures posted
			• Good housekeeping standards maintained
			• Waste removed regularly
			• Means of escape present and known to occupants
			• Evacuation procedure in place and practiced each semester
			• Assembly point known to occupants
				• Maintain current controls
				
				• Ensure compliance with ERT and evacuation procedure
				• Ensure clear access to firefighting equipment
				• Ensure escape routes and emergency exits are kept clear and unobstructed
					2
					
					1
						• All staff and Head of School
						
						• All staff
							Ongoing
							
							Ongoing

			• Emergency exits are clearly marked and free from obstructions • Emergency lighting in place • Staff members act as evacuation marshals • No smoking policy in place • Proper storage of flammable liquids and gas cylinders • Scheduled maintenance of buildings services (heating, electricity, ventilation etc.) • Hot work permit system in place • Compliance with building regulations • Site specific Emergency Manual for the Grangegorman/Park House campus available on the website www.dit.ie/health safety				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
002	**Manual Handling** **List specific examples:** **Admin Areas:** • Office supplies • Paperwork **Teaching Areas:** • Bench projectors • Class materials **Workshop & Laboratory Areas:**	• Manual Handling-related injuries, e.g. back injury Slips, trips, falls	• All staff compliant with and adhere to mandatory manual handling training • Mechanical aids in use e.g. trolleys • Safety ladder/step stools available for access to height • Manual handling risk assessments available to all staff, contact local Occupational Health Officer • Good housekeeping • Safe work environment • Implement team lifting where required • Adequate lighting maintained • Assistance from colleagues - team lifting • Report issues and health concerns to Line manager • Heavy items not stored above shoulder height	• Maintain current controls • Refresher training to be carried out where necessary • Inspection and maintenance programme for mechanical aids and safety ladders/step stools	**With current controls:** 1 **With Actions applied:** 1	• All staff Head of School	Ongoing Ongoing

	• Display motors
	• Electrical equipment
	• Circuit Boards
	
	Who is harmed:
	
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
			Lift in the Central Quad/Park House buildings				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

003	**Work Equipment, Machinery & Tools:**
	• **Pedestal Drill**
	• **Grinder**
	Request further info from School
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Eye injury from ejected material
		• Lacerations from contact with rotating parts
		• Entanglement in moving parts
		• Hearing damage
			• Use of workshop and laboratory facilities by students is not permitted without staff supervision
			• Equipment used and maintained in accordance with manufacturer's instructions
			• Safety guards provided and used
			• Work equipment is CE marked and comes with CE certificate of conformity
			• Emergency stop switch provided
			• First aid kit provided in each laboratory and workshop
			• Information and training provided in safe use of equipment
				• Maintain current controls
				• SOP to be developed for each item of equipment
					With current controls:
					2
					With Actions applied:
					1
						• Head of School
						Head of School
							Ongoing
							Ongoing

			• Inspection and maintenance programme for equipment • Defects reported and faulty equipment taken out of use • Ensure no loose or dangling clothing/personal effects when operating equipment with moving/rotating parts • Adequate lighting appropriate to work tasks • Appropriate PPE provided and worn				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

004	**Work Equipment, Machinery & Tools:**
	• **Process Rigs (pH, temperature, and pressure)**
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Chemical burns
		• Electrical shock
		• Burns from hot surfaces
		• Eye damage from compressed air
		Fire
			• Equipment used and maintained in accordance with manufacturer's instructions
			• Safe guards and insulation for electrical wires and hot pipes
			• Warning signage in place for hot surfaces and compressed air
			• First aid kit provided in each laboratory and workshop
			• Information and training provided in safe use of equipment
			• Inspection and maintenance programme for equipment
			• Defects reported and faulty
				• Maintain current controls
				• SOP to be developed for equipment
					With current controls:
					2
					With Actions applied:
					1
						• Head of School
						Head of School
							Ongoing
							Ongoing

			equipment taken out of use • Adequate lighting appropriate to work tasks • Appropriate PPE provided and worn • Mandatory training for staff in one day Emergency First Aid course • Fire detection system and fire-fighting equipment in place				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
005	**Work Equipment** **Electrical & Electronic Equipment** • **Circuit Boards** • **Voltage Meters** • **Transformers** • **Chargers** • **Generators** • **Switch Boards** ***Request further info from School*** **Who is harmed:** • Staff members	• Unauthorised access • Electrical shock or burn • Electrical fire	• All mains sockets, plugs and flexible cords are maintained in a safe condition • Equipment used and maintained in accordance with manufacturer's instructions • Inspection and maintenance programme for electrical equipment • Restricted voltage to circuits • Warning signage in place for high voltage • Work equipment is CE marked and comes with CE certificate of conformity • Adequate guarding/ protection in place to prevent contact with exposed live parts	• SOP to be developed for safe use of each item of electrical equipment	**With current controls:** 2 **With Actions applied:** 1	Head of School Head of School	Ongoing 1st October 2021

	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
			• Insulated earthing mats in use
			• Emergency shut-down /cut-off devices available
			• Electrical circuit boards locked when not in use and keys stored in a secure location
			• Access by students to laboratories and workshops is prohibited without staff supervision
			• Eating and drinking in laboratories and workshops is prohibited
			• First aid kit provided in each laboratory and workshop
			• Information and training provided in safe use of equipment
			• Defects reported and faulty equipment taken out of use
			• Supervision of students by staff
			• Fire detection system and fire-fighting equipment in place				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

006	**Manually Operated Hand Tools**
	
	List items used e.g.
	• **Pliers**
	• **Clippers**
	• **Craft Knives**
	• **Screwdrivers**
	• **Hammers**
	• **Saws**
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
		• Cuts and lacerations
		• Blunt trauma/impact
		Eye injuries
			• Hand tools kept clean, sharp and in good condition
			• Hand tools visually checked before each use
			• Defects reported and faulty tools taken out of use
			• First aid kit provided in each laboratory and workshop
			• Mandatory training for staff in one day Emergency First Aid course
			• Information and training provided in safe use of hand tools
			• Inspection and maintenance programme for hand tools
				• Maintain current controls	**With current controls:**
					2
					
					With Actions applied:
					1
						• All staff and students	Ongoing

	• people with disabilities		• Supervision of students by staff • Adequate lighting to ensure good visibility for work tasks • PPE provided and worn as required • Edges of sharp hand tools protected/sheathed when not in use and when being carried • Hand tools stored safely when not in use				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

007	**Power Hand Tools**
	
	List items used e.g.
	• **Saws**
	• **Drills**
	• **Grinders**
	
	Request further info from School
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
		• Burns
		• Entanglement
		• Eye injuries
		• Cuts
		• Amputation
		• Trauma from ejected materials/flying particles
		• Vibration
		• Noise
		Contact with moving parts
			• Power tools used and maintained in accordance with manufacturer's instructions
			• Operators manual available
			• Equipment is CE marked and comes with CE certificate of conformity
			• Power tools visually checked before each use
			• Defects reported and faulty/damaged tools taken out of use
			• Safety guards provided and used
			• First aid kit provided in each laboratory and workshop
			• Mandatory training for staff in one day Emergency First Aid course
				• SOP to be developed for each power tool
				
				• PAT testing to be carried out as appropriate
					With current controls:
					2
					
					With Actions applied:
					1
						Head of School	1st October 2021

	• people with disabilities		• Information and training provided in safe use of power tools • Inspection and maintenance programme for power tools • Supervision of students by staff • Adequate lighting to ensure good visibility for work tasks • PPE provided and worn as required • Vice/clamps provided and used as required to secure work pieces • Ensure no loose or dangling clothing/personal effects when operating power tools with moving/rotating parts • Isolate power before making adjustments or changing accessories • Power tools greater than 110 volts are not used in external or damp locations				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

008	**Portable Appliances & Handheld Equipment**
	
	• **Voltage meter**
	
	Request further info from School
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Power surge
		• Electrical shock or burn
		• Trailing cables
			• Sockets have switches to allow shut off of power
			• Provision of adequate protective devices within the electrical system
			• 110v maximum output
			• On the job training and supervision of students by staff
			• Good cable management
			• Good standard of housekeeping
				• Maintain current controls
				• Inspection and maintenance programme for portable appliances and hand-held equipment
					With current controls:
					2
					
					With Actions applied:
					1
						• All staff and students
						
						Head of School
							• Ongoing
							
							1st October 2021

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

009	**Portable Appliances & Handheld Equipment**
	
	• **Heat Gun**
	
	Request further info from School
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Burn from hot surface
		• Fire
		• Trailing cables
			• Sockets have switches to allow shut off of power
			• Provision of adequate protective devices within the electrical system
			• On the job training and supervision of students by staff
			• Good cable management
			• Good standard of housekeeping
			• First aid kit available in each laboratory and workshop
			• Mandatory training for staff in one day Emergency First Aid Course
			Fire detection system and fire-fighting equipment available
				• Maintain current controls
				
				Inspection and maintenance programme for portable appliances and hand-held equipment
					With current controls:
					2
					
					With Actions applied:
					1
						• All staff and students
						
						• Head of School
							Ongoing
							
							1st October 2021

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
010	**Noise** **Note noise sources:** • **Work equipment** • **Power tools**	• Hearing loss / damage • Disruption/ distraction • Interference with communications and warning signals • Fatigue • Tinnitus	• Provision of hearing protection • Supervision to ensure wearing of hearing protection • Information and training with regard to use of hearing protection	• Maintain current controls • Arrange assessment of noise levels to be carried out in the area • Erect safety signs re: noise levels and hearing protection • Where necessary introduce engineering and administrative controls to reduce exposure e.g. enclose the source of noise, minimise time spent in noisy areas, job rotation etc.	**With current controls:** 2 **With Actions applied:** 1	Head of School	1st October 2021

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
011	**Structural:** Floors Walls Ceilings Doors Fixtures and fittings: o Shelving o Furniture o Partitions **Who is harmed:** • Staff members • Students • Visitors • Contractors/service providers • Sensitive risk groups: • young persons • pregnant women • people with disabilities	• Personal Injury • Slips, Trips and Falls • Collapse Trapping	• Building and associated fixtures and fittings appear to be stable and structurally sound • Defects and hazards are reported to the Building Maintenance Manager or through online hazard reporting	• Contact **Buildings Manager** if problems arise • Ensure where vision panels on fitted on doors they are not obscured Maintenance and inspection programme to be implemented	**With current controls:** 1 **With Actions applied:** 1	• All Staff • All staff and students Buildings Manager	As necessary Ongoing Ongoing

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

012	**Slips, Trips & Falls**
	
	Note flooring type and condition
	
	Note defects (if any)
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
		• Slips/trips/falls from:
		  • wet floor conditions
		  • uneven surfaces
		  • trailing cables
		  • raised obstacles
		  • poor lighting
		  • poor housekeeping
		  • changes in floor levels
			• All routes kept clear and unobstructed
			• SOP for cleaning – floors generally cleaned early morning when most personnel are off site – link to Sedexo
			• SOP for spillages
			• Use of warning signage where appropriate
			• Report hazards
			• Good cable management
			• Changes in floor levels identified and marked
			• Door mats provided at main entrance
			• Hand-rail on steps/stairs
				• 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.
					With current controls:
					2
					
					With Actions applied:
					1
						• All staff and students
						
						• Building Maintenance Manager
							Ongoing
							
							Ongoing

	• pregnant women • people with disabilities		• Stair nosing fitted with anti-slip finish • Adequate lighting • Good housekeeping • Eating and drinking in laboratories and workshops is prohibited				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

013	**Access and Egress**
	
	Opening times are on the TU Dublin website – click here
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Security threats
		• Threats from public
		• Violence / Assault
		• Unwanted visitors
			• Front desk is manned at all times by a porter
			• CCTV in common areas
			• Rooms locked when not in use
			• Adequate lighting
			• Students have TU Dublin I.D. card
			Vision panels on doors
				• Maintain current controls
				
				• Report suspicious activity to porters
				
				• Secure personal property
				
				• Carry out spot-checks of student I.D. cards
				
				Ensure vision panels on doors are not obscured
					With current controls:
					2
					
					With Actions applied:
					1
						• Buildings Office
						
						• All building occupants
						
						• All building occupants
						
						• Porter on duty
						
						All staff and students
							Ongoing
							
							As necessary
							
							Ongoing
							
							Ongoing
							
							Ongoing

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

014	**Office Equipment:**
	
	Desktop PCs
	Photocopiers
	Printers
	Shredders
	Guillotines
	Filing Cabinets
	
	Who is harmed:
	• Staff members
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
		• Personal injury due to:
		  • chemical contact when changing toner
		  • burns from clearing jams
		  • electrical shock/contact with live parts
		  • entanglement in moving parts
		  • Cuts when handling paper
		• Incorrect disposal Lack of information / training
			• Gloves worn when changing cartridges/toner and wash hands after use
			• Power turned off before clearing jams or making adjustments to office equipment
			• Manufacturer's instructions followed
			• PCs supported and maintained by TU Dublin Information Services
			• Correct disposal of waste cartridges
			• Ensure no loose or dangling clothing/personal effects when operating equipment with moving/rotating parts e.g. shredder
			• Do not overload electrical sockets
				Maintain current controls	**With current controls:**
					2
					
					With Actions applied:
					2
						All staff	Ongoing

	• people with disabilities		• Guard in place on guillotine • Filing cabinets fitted with ant-tilt mechanism • Label defective equipment and report to line manager				

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

015	**Office / Workstation**
	
	Ergonomics
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Musculoskeletal Disorders (MSD's)
		• Upper limb disorders
		• Poor posture
		• Back problems
		• Fatigue
		• Eyestrain
		• Thermal discomfort
			• Online eLearning programme available
			• Workstation risk assessments and information and training available from the Health & Safety Office on request
			• Eye tests available for staff at the TU Dublin National Optometry Centre (NOC)
			• Adjustable chairs
			• Window blinds in place
			• Adequate space
			• Adequate storage
			• Good housekeeping
			• Good cable management
			• Adequate building services (heating, lighting ventilation)
			Follow manufacturer's instructions for use of equipment
				• Maintain current controls
				• Contact Occupational Health Office for assessment of individual workstations
				• Contact NOC for eye test
				• Ensure laptops are not used in place of desktop PCs for prolonged computer work
					With current controls:
					2
					
					With Actions applied:
					2
						All staff	Ongoing
							
							As necessary
							
							As necessary
							
							Ongoing

PHYSICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
016	Mechanical Lifting Systems	N/A	N/A	N/A	N/A	N/A	N/A

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

017	**Transport:**
	• Delivery and collection vehicles
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Injury to person/struck by moving vehicle
		• Collision with building or structure
			• Entry to the car-park is controlled by a barrier which is operated by the porter on duty
			• Adequate lighting
			• Vehicle reversing is avoided where possible
			• Vehicles are braked to prevent movement during loading/unloading
			• Refuse skips are located away from overhead electrical power lines
				• Deliveries to be coordinated with suppliers for off-peak times
				• Identify a designated area for the loading/unloading of goods
				• Appoint TU Dublin staff member to act as banksman to assist with directing vehicle access/egress at the gate and movement around the premises
				Consider marking out designated walkways for pedestrians
					With current controls:
					3
					
					With Actions applied:
					1
						Head of School and Building Maintenance Manager	1st October 2021

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
018	**Hot Surfaces / Liquids / Solids** Catering appliances in staff common room or canteen • Kettle • Toaster • Microwave • Burco boiler **Who is harmed:** • Staff members • Students • Visitors • Sensitive risk groups: • young persons • pregnant women • people with disabilities	• Contact burns • Scalds • Spillage Fire	• Warning Signage • Heat shielding of hot surfaces • Equipment well maintained • Use of lids/covers to prevent spillages • Procedure for dealing with spillages	• Maintain current controls • Report defects to Buildings Office • Use of electrical appliances to prepare food and beverages in office areas should be discouraged	**With current controls:** 1 **With Actions applied** 1	• All staff	Ongoing As necessary

PHYSICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
019	Pressure Systems	N/A	N/A	N/A	N/A	N/A	N/A

PHYSICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
020	Radiation	N/A	N/A	N/A	N/A	N/A	N/A

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

021	**Vibration**
	
	Note sources:
	• **Hand-held power tools**
	• **Floor / bench mounted machines**
	
	School to provide further info
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Damage to nerves and blood supply
		• Hand Arm vibration exposure "white finger"
		• Whole Body vibration exposure
			• Equipment used and maintained in accordance with manufacturer's instructions
			• Task rotation used to minimise exposure
			• Regular breaks are taken from use
			• Equipment is mounted and not hand-held where possible
			• Gloves provided and worn
			• Information and training provided
				• Source information from manufacturer on vibration exposure levels and maximum times for use
				• Implement engineering controls to reduce vibration levels e.g. dampening materials
					With current controls:
					2
					
					With Actions applied
					1
						Head of School	1st October 2021

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

022	**Services:**
	Heating
	Note the source of heating:
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Environment too hot or cold
		• Misuse of portable heaters
		• Fire
		• Burns
		• Carbon monoxide poisoning
			• Heating in working order
			• Room users can adjust heating levels
			• Service and maintenance carried out regularly by a competent person
			• Combustible materials kept away from direct heat source
			• Heat source kept clear and free from obstructions
			• Accessible hot pipes are lagged
			• Environmental monitoring from the Health and Safety Office on request
			• Fire detection systems in place
				• Maintain current controls
				• Contact **Buildings Office** if problems or defects arise
					With current controls:
					1
					With Actions applied
					1
						• All staff and students	Ongoing
							As necessary

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

023	**Lighting**
	
	Note type of lighting and any defects
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Inadequate lighting
		• Glare
		• Eyestrain
		• Slips, trips , falls
		• Headaches due to flickering fluorescent lighting
			• Light switches easily accessible
			• Adequate lighting level for nature of work
			• Environmental monitoring available from the Health and Safety Office on request
			• Service and maintenance by competent person
			• Prompt replacement of faulty lighting units
				• Contact **Buildings Office** if problems or defects arise	**With current controls:**
					1
					
					With Actions applied:
					1
						All staff and students	As necessary

PHYSICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			

024	**Ventilation and temperature**
	
	Note type of ventilation – natural/mechanical
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Environment too hot or cold
		• Inadequate ventilation
		• Falls from heights from windows
			• Openable windows available for intake of fresh air
			• Blinds in place and in working order
			• Suitable equipment/devices available for the opening and closing of high level windows
			• Service and maintenance of ventilation system by competent person
			• Office temperature of at least 17.5 degrees Celsius (after one hour of work) Environmental monitoring from the Health and Safety Office on request
				• Maintain current controls
				
				• Contact **Buildings Office** if problems or defects arise
					With current controls:
					1
					
					With Actions applied:
					1
						All staff	Ongoing
							
							As necessary

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

025	**Electricity**
	
	Note any defects
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
		• Electric shock
		• Electrocution
		• Burns
		• Fire
		• Explosion
		• Electrical arcing
		• Use of faulty equipment
		• Contact with live parts
		• Unmarked distribution boards
		• Inadequate electrical installations
			• Sufficient numbers of electrical sockets
			• Electric leads not worn or trailing
			• Competent person to carry out repairs / works
			• Installations checked regularly
			• All works servicing and testing is carried out in accordance with regulations and current standards
			• Enclosures/covers are in place to prevent contact with live equipment/parts
			• Shut down equipment when not in use and end of day
			• Adequate protection for circuit boards,
				• Contact **Buildings Office** if problems arise
				• Do not overload sockets
				• Keep use of adaptors and extension leads to a minimum
				• Report defects immediately and take damaged equipment out of use
				• Ensure PAT testing of portable electrical appliances subject to wear and tear
				• Discourage use of domestic electrical appliances such as kettles, toasters,
					With current controls:
					2
					
					With Actions applied:
					1
						• All staff and students
						
						Head of School
							Ongoing

	• people with disabilities		distribution boards etc. • Good housekeeping • Suitable fire extinguishers provided • Switch off equipment before cleaning or making adjustments • Means of cutting off power to installations and equipment is provided • Work on live equipment is avoided • Electrical equipment and fittings is suitable for the work environment • All circuits supplying socket outlets are protected by an RCD • Operation of the RCD is tested regularly • Eating and drinking in laboratories and workshops is prohibited	microwave ovens in offices.			Annually/ As required

PHYSICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
026	Asbestos	N/A	N/A	N/A	N/A	N/A	N/A

PHYSICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
027	Confined Spaces	N/A	N/A	N/A	N/A	N/A	N/A

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
028	**Lasers** **Source and class of laser:** • Optical sources for test and measurement (Various) - Class 3R • HeNe visible red laser - Class 2M • Laser pointers - Class 1 • Benchtop Helium Neon **Class 2B** lasers (all less than 1 mW); • **Class 3B** (850-1550 nm) fibre coupled lasers (all less than 5mW). **Who is harmed:** • Staff members • Students	• Eye injury/damage	• Warning signage in place • Do not stare or look directly at the beam for prolonged period • Do not point lasers at any person or at reflective surfaces • Information and training provided • Follow manufacturer's instructions for use and maintenance • Keep duration of use to a minimum and take regular breaks • Turn off when not in use	• Maintain current controls • Report defects to Head of School and take damaged equipment out of use • Inspection and maintenance programme for lasers • Develop SOP for safe use of lasers	**With current controls:** 2 **With Actions applied** 1	• Staff and students Head of School	• Ongoing • As necessary 1st October 2021

	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities						

PHYSICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

029	**Construction / Maintenance Work**
	
	Example:
	• Maintenance employees
	• Building contractors
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Unfamiliar with TU Dublin buildings and safety procedures
		• Injury to contractors, staff, students, visitors members of the public
			• Only trained and authorized employees carry out maintenance work
			• Maintenance employees and building contractors made aware of all risks e.g. gas, water and electricity points and possible locations of asbestos
			• Buildings Office control all contractors
			• Permit to work system for hot works, work at height, confined spaces etc.
			• The front desk is manned at all times by a porter
			• Sign-in required
			• Compliance with TU Dublin code of practice for contractors
			• eLearning programme for contractors
				• Maintain current controls	**With current controls:**
					1
					
					With Actions applied:
					1
						Head of School in conjunction with Building Maintenance Manager	Ongoing

			• TU Dublin Contractor safety badge • Risk assessment and method statements completed by contractors and submitted to the Buildings Office • Good housekeeping • Areas of hazardous works cordoned off to prevent unauthorized access • Appropriate PPE worn/used • Tools and equipment in good working order • Warning signage				

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
030	**Work Activities & Processes** • **Preparation and processing of Printed Circuit Boards** Involves: 1. UV light exposure to expose the printed circuit onto photoresist board. 2. Developer solution to remove exposed areas. 3. Etching solution to remove exposed copper. 4. Cleaning, cutting and drilling to	• Contact with chemical agent • Exposure to UV light	• Use of equipment by students is prohibited without staff supervision • Chemical agent used in the etching process is clearly labeled and a Safety Data Sheet (SDS) is available • Appropriate PPE is provided and worn • A ventilation and extraction system is provided and is required to be in operation at all times during the processing of printed circuit boards • Used chemicals from the etching process are disposed of safely • The light source is only activated when a protective cover is closed. A safety interlock switch is built into the unit to ensure this	• Inspection and maintenance programme for ventilation and extraction system • Provide safety information and training to students • Ensure proper storage of chemical agents used for etching	**With current controls:** **2** **With Actions applied:** **1**	Head of School	1st October 2013

	complete the process.
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities						

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

031	**Work Activities & Processes**
	
	Soldering
	
	Soldering is the process of joining two metals together using a soldering iron and a metal alloy (solder).
	
	For details refer to the Soldering SOP
	
	Who is harmed:
	
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Burns
		• Fire
		• Inhalation of fumes / soldering flux
		• Accidental ingestion of solder constituents
			• Use of equipment by students is prohibited without staff supervision
			• Appropriate PPE is provided and worn
			• Fire detection and fire-fighting equipment in place
			• Hand-washing facilities provided
			• Eating and drinking in laboratories and workshops is prohibited
			• A vice, pliers, tweezers or clamps is used for holding components
			• Safety information and training provided to students
			• First-aid kit provided in each laboratory and workshop
			• Mandatory training for staff in one day Emergency First Aid course
			• Equipment turned off when not in use
			• Solder waste disposed of appropriately
			• Used solder sponges and contaminated rags disposed of as hazardous waste
				• Ensure rosin-free flux is used where possible
				• Inspection and maintenance programme for soldering equipment
				• Local exhaust ventilation for workstations where soldering is carried out
					With current controls:
					
					3
					
					With Actions applied:
					
					2
						Head of School	1st October 2021

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

032	**Work Activities & Processes**
	
	Terminating/Splicing Optical Fiber
	
	Request further info from School
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Cuts/piercing to eyes or skin from small pieces of scrap fiber
		Accidental ingestion of scrap fiber
			• Appropriate PPE, including safety glasses, is provided and worn
			• Safety information and training provided to students on handling scrap fiber
			• Eating and drinking is prohibited in the lab to avoid accidental ingestion of scrap fiber
			• Scrap fiber pieces are collected using a tweezers to avoid contact with skin
			• Scrap fiber is disposed of in sharps containers
			• First-aid kit provided in each laboratory and workshop
			• Mandatory training for staff in one day Emergency First Aid course
					With current controls:
					2
					
					With Actions applied:
					1
						Head of School	1st October 2013

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

033	**Housekeeping**
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Slips, trips and falls
		• Increased fire load
		• Falling objects Collisions
			• Fire load (i.e. sources of ignition and fuel) kept to a minimum
			• All escape routes and emergency exits kept clear and unobstructed
			• Spillages cleaned immediately
			• Wet floor signs used where required
			• Adequate lighting
			• Adequate waste disposal
			• Lockers available to students for storage of personal belongings
			• Where lockers are not available, a designated area in a laboratory for the temporary storage of bags and coats etc. that does not create an obstruction or trip/fall hazard.
				• Maintain current controls
				
				• Arrange weekly spot checks of areas to ensure escape routes and emergency exits are kept clear and unobstructed
					With current controls:
					2
					
					With Actions applied
					1
						• All staff and students
						
						• Head of School
							Ongoing
							
							Ongoing

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

034	**Cleaning**
	
	Note local arrangements and frequency
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Lack of cleanliness or hygiene
		• Manual handling injury
		• Exposure to hazardous substances
		• Spillages: slips, trips and falls
		• Lack of/inappropriate PPE
			• Daily cleaning schedule
			• Signage (e.g. wet floor signs) available and used
			• Proper storage of cleaning equipment and cleaning substances
			• Proper labeling of cleaning agents
			• Use of appropriate cleaning equipment
			• Report defects and hazards
			• Information and training for cleaning staff
			• SOPs in place – link to Sadexo
			• PPE for cleaning staff
				• Maintain controls	**With current controls:**
					2
					
					With Actions applied
					2
						Cleaning staff and supervisors (Sadexo)	

OPERATIONAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			

035	**Waste Disposal & Removal**
	
	Note any specialist waste:
	
	Note local arrangements and frequency
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Waste accumulation
		• Fire
		• Spillages
		• Odour
		• Vermin
			• General waste and recycling bins present
			• Dispose of waste appropriately in bins provided
			• Segregate waste as appropriate
			• Waste removed on a regular basis by cleaning contractors
			• Keep waste away from sources of ignition e.g. heaters, electrical appliances
				• Maintain current controls	**With current controls:**
					2
					
					With Actions applied:
					1
						• All staff and students
						Cleaning contractors
							Ongoing

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

036	**Signage and Documentation**
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		Lack of knowledge regarding safety and emergency procedures	The following signage is in place:
			• Emergency Exit
			• Emergency First Aid Procedure
			• Evacuation plan
			• Fire Action Notice Point
			• List of trained first aiders
			• Safety Notice point
			• No Smoking
			• Emergency contact numbers
			• Refuge point
			• PPE
			Hazard warning (where appropriate)
				• Maintain current controls and update signage as required
				• Observe signage in place
					With current controls:
					2
					
					With Actions applied:
					2
						• Head of School and Building Maintenance Manager
						
						Staff, students, visitors, contractors/ service providers
							Ongoing

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

037	**Incidents**
	
	Hazard Reporting
	
	First Aid
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Lack of first aid supplies
		• Lack of trained first aiders
		• Lack of knowledge/skills in the event of an incident
		• No reporting of incident(s)
		• No reporting of hazards
			• First-aid kit available in each laboratory and workshops
			• Incident report book available at the front desk
			• All incidents to be reported immediately and an incident report form completed
			• First Aid supplies available from Health & Safety Office on request
			• Training for staff in Emergency Response and First Aid
			• List of trained first aiders at www.dit.ie/safework
			• Emergency first aid procedure posted
			• AED available at the front desk
			• Individuals trained in use of the AED
			Online hazard reporting facility available
				• Attend training for staff in ERT and First Aid as per TU Dublin Policy
				• Ensure adequate number of staff trained in first aid
					With current controls:
					2
					
					With Actions applied
					1
						• All staff
						
						Head of School
							As required
							
							Ongoing

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

038	**Working at Height**
	• Access to goods stored at a height
	• Opening high level windows
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Falls from height	• Safety ladder/step stool provided for safe access to height
			• Use of chairs /tables for access to height is prohibited
			• Suitable equipment/devices available for the opening and closing of high level windows
			• Supervision of students by staff
				• Maintain current controls
				
				• Inspection and maintenance programme for safety ladders/step stools
				• Completion of eLearning programme for work at height
					With current controls:
					2
					
					With Actions applied
					1
						• All staff and students
						
						• Head of School
							Ongoing

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
039	**Out of Hours Access / Lone Working** Staff may work alone from time to time in offices during normal opening hours	• Violence • Inability to make contact in the event of an emergency etc. • Unauthorised access • Locked into building	• The front desk is manned at all times by a porter • CCTV in common areas • Rooms locked when not in use • Vision panels fitted on doors • Sweep-search of building conducted by porter as part of closing down procedure • Building opening/closing times posted on TU Dublin website • **Laboratories, workshops and offices equipped with telephones – school to confirm** • Access to laboratories and workshops by students is prohibited without staff supervision	Maintain current controls	**With current controls:** 2 **With Actions applied** 1	Head of School and Building Maintenance Manager	Ongoing

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

040	**Field Trips**
	
	Make note of recurring events e.g. site visits
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Injuries
		• Medical emergencies
		• Accidents and incidents
		• Missing persons
		• Substance abuse
		• Road traffic accidents
		• Inclement weather
		• Site terrain
		• Exposure to physical/chemical/ biological agents Human factors
			• TU Dublin Field Trip Guidelines in place
			• Separate field trip risk assessment template completed for each fieldtrip and control measures implemented
			• Health and safety information provided to field trip participants
			• eLearning programme available to participants
			• Adequate supervision of students
			• Provision of PPE where appropriate
			• Adherence to local/site rules
				Request further info from School	**With current controls:**
					3
					
					With Actions applied:
					1
						All staff	Ongoing

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

041	**Work Placement**
	
	Note type of work placement, common locations etc.
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Injuries
		• Accidents and incidents
		• Lack of familiarity with work environment and work practices
			• Specific risk assessment carried out and control measures implemented
			• Work placement factsheets provided to host organization, students and TU Dublin mentors
			• Pre-placement induction safety talks available from the Health & Safety Office
			• TU Dublin work placement mentor appointed
			• TU Dublin guidance notes on work placements
			• Report all incidents and accidents to TU Dublin
			• Insurance cover in place
			• Training and supervision of students by host organisation
				Request further info from School	**With current controls:**
					2
					
					With Actions applied:
					2
						Academic Staff	**Ongoing**

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

042	**Events Hosting**
	
	Make note of recurring or special events e.g. open days, exhibitions etc.
	
	Request further info from School
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Injuries
		• Accidents and incidents Unfamiliar with TU Dublin premises and emergency plans
			• Specific risk assessment carried out for each event and control measures implemented
			• Emergency plans in place with regard to evacuation and first aid
			• Report all incidents and accidents to TU Dublin
			• Provide relevant health and safety information to event participants
			• **Protection of Children and Young Persons, see TU Dublin Child Protection Policy.**
				Request further info from School	**With current controls:**
					
					With Actions applied		

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

043	**Conferences / Seminars**
	
	Make note of any recurring or special events
	
	Request further info from School
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Travel to and from
		• Road traffic accidents
		• Unfamiliar with venue
		• Medical emergency
		• Missing persons
			• Taxi vouchers available to staff for travel in Dublin
			• Staff obey rules of the road if driving or cycling
			• Adequate insurance, tax and NCT on vehicles used for transport
			• Approval required from Line Manager for the use of personal vehicles
			• Familiarise yourself with local emergency procedures and first aid arrangements
			• Report defects and incidents to venue management
			• Approval for attendance to be sought from Line Manager as per TU Dublin procedures
				Awaiting info from School	**With current controls:**
					
					With Actions applied		

OPERATIONAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

044	**Storage**
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• 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
		• Collapse of shelving or racking
		• Falling objects
			• Safe access and egress
			• Storage avoided above shoulder height where possible
			• Items stored appropriately and securely
			• Items segregated where necessary
			• Storage units/shelves/racking secure and fit for purpose
			• Storage units/shelves/racking not overloaded
			• Step ladder/foot stool or other suitable equipment available for accessing higher shelving units
			• Staff trained in manual handling
			• Items not stored in walkways
			• Defects reported
			• Adequate lighting and ventilation
			Lockers available to students for personal belongings
				• Maintain current controls
				• Inspection and maintenance programme for storage units/shelves/racking
				• Inspection and maintenance programme for safety ladders/foot stools
					With current controls:
					2
					
					With Actions applied
					1
						• All staff and students
						• Head of School
						
						Head of School
							Ongoing
							
							1st October 2021
							
							1st October 2021

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

045	**Sensitive Work Groups:**
	
	Pregnant Employees /Students & Nursing Mothers
		• Fatigue
		• Harm to mother, unborn child or breastfeeding baby from exposure to:
		  ○ Physical agents e.g. noise, vibration, manual handling
		  ○ Chemical agents
		  ○ Biological agents
			• Specific risk assessment carried out for individual pregnant employees/students and control measures implemented as identified and necessary by Health & Safety Office
			• Rest facilities available - **designated first-aid room/occupational health office**
			• Follow medical advice
				• Pregnant employees/students and nursing mothers to contact Occupational Health Officer Rosie Cannon to ensure a risk assessment is carried out.	**With current controls:**
					1
					
					With Actions applied:
					1
						Staff and students	As necessary

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

046	**Sensitive Work Groups:**
	
	Young Persons
	
	Note circumstances / events where young people present
	
	• **School open days**
	• **School exhibitions**
		• Lack of training and experience
		• Lack of familiarity with TU Dublin work environment, work practices and emergency plans
		• Exposure to special risks:
		  ○ Physical agents
		  ○ Chemical agents
		  ○ Biological agents
		  ○ Hours of work
			• Induction programme for all new students
			• Supervision of students by staff
			• TU Dublin Child Protection Policy
			• TU Dublin emergency plans in place
			• Student support services available
			• Garda vetting in place for staff
					With current controls:
					1
					
					With Actions applied:
					1
						Head of School	

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
047	**Sensitive Work Groups:** **People with Disabilities** **Note particular issues with work activities and physical environment**	• Poor access/egress • Difficulty with evacuation No risk assessment (RA) completed	• Specific risk assessment carried out for individuals on a case by case basis by Health & Safety Office • Personal Emergency Egress Plan (PEEP) completed where necessary • Reasonable accommodation identified in risk assessment • Lift present and in working order • Disability Support Service available • Accessible toilet available • Health & Safety induction available to staff and students	• Staff/students with disabilities to contact Occupational Health Officer Rosie Cannon to ensure a risk assessment is carried out. • Advise visitors to the School to notify TU Dublin host in advance of any special needs	**With current controls:** 1 **With Actions applied:** 1	• Staff and students Head of School	As necessary As necessary

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
048	**Sensitive Work Groups:** **New Recruits**	• Lack of experience • Lack of training • Accidents and incidents • Lack of training and experience • Lack of familiarity with TU Dublin work environment, work practices and emergency plans	• Induction available for new staff • Line Manager gives induction specific to local department • Mandatory training to be completed as soon as possible after recruitment • Supervision of new staff	• Maintain current controls • Consider assigning a mentor/buddy to new recruits	**With current controls:** 1 **With Actions applied:** 1	Head of School	Ongoing

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
049	**Sensitive Work Groups:** **Undergraduate** **Students including apprentice students**	• Lack of experience • Lack of training • Accidents and incidents • Lack of familiarity with TU Dublin work environment, work practices and emergency plans • Lone working	• Induction programme for new students • Supervision by staff in practical environments e.g. workshop and laboratory classes, field trips etc. • Emergency procedures in place • First aid facilities available • Task-specific instructions/ demonstrations provided by staff • Student support services available • Risk Assessment form identifying potential hazards is required to be completed by staff and student(s) before undertaking final year project work.	• Maintain current controls	**With current controls:** 1 **With Actions applied:** 1	Head of School	Ongoing

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			
050	**Sensitive Work Groups:** **Postgraduate Students**	• Lack of experience • Lack of training • Accidents and incidents • Lack of familiarity with TU Dublin work environment, work practices and emergency plans • Lone working	• Induction programme for students • Supervisor gives local induction specific to department • Mandatory training to be completed • Supervision • Out of hours/lone working policy in place	• Maintain current controls	**With current controls:** 2 **With Actions applied** 1	Head of School	Ongoing

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

051	**Stress**
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Health effects – physical and mental
		Absence from work/college
			• Communication between staff, students and management
			• Employee Assistance Programme (EAP) in place
			• Student health centre and counselling service available
			• Occupational Stress Management Policy & Procedures in place
			• Training and development courses available to staff on Stress Management, Time Management, Conflict Handling, Personal Skills etc.
				Maintain current controls	**With current controls:**
					2
					
					With Actions applied:
					2
						Head of School	Ongoing

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

052	**Violence**
	
	Refer to frontline staff e.g. public counter, cash handling, dealing with difficult people or situations
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Theft
		• Verbal threats/abuse
		• Physical assault / injuries
		• Stress, fear, anxiety
			• Emergency Response Training (ERT) mandatory for staff
			• Porter on duty at front desks
			• TU Dublin staff and students report suspect individuals to TU Dublin Institute of TechnologyBuildings Office
			• Adequate lighting
			• Policy for lone working/out of hours access in place
			• Rooms locked when not in use
			• Secure lockers provided for personal belongings
			• CCTV in common areas and signage in place
			• Vision panels fitted on doors
			• Panic Button installed in labs/offices
					With current controls:
					
					With Actions applied:		

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

053	**Bullying & Harassment**
	
	Who is harmed:
	• Staff members
	• Students
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Effects on physical and mental well-being	• TU Dublin Dignity at Work: Anti Bullying & Harassment Policy in place
			• Dignity at Work contact persons available
			• Dignity at Work training programme for staff
			• Employee Assistance Programme (EAP) in place
			• TU Dublin Procedure for complaints and investigations
			• Student support services available
				• Ensure compliance with policies and procedures in place
				• Maintain current controls
					With current controls:
					1
					
					With Actions applied:
					1
						Staff and students	Ongoing

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

054	**Welfare Facilities:**
	• Sanitary Facilities
	• Staff room
	• Canteen
	
	Note local arrangements
	request further information from school
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Inadequate facilities
		• No potable water
		• No means for boiling water/heating food
		• No seating/resting area
		• No hand-washing facilities
			• Staff room/canteen present with seating facilities
			• Drinking water available
			• Hot and cold water available in sanitary facilities
			• Accessible toilet available
			• Adequate sanitary facilities available
			• Hand washing facilities adequate
				• Care to be taken with hot surfaces, hot drinks and boiling water
				• Use of domestic appliances such as kettles, toasters, and microwave ovens in offices to be discouraged
					With current controls:
					1
					
					With Actions applied
					1
						Staff and students	Ongoing

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

055	**Visitors**
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Lack of experience
		• Lack of training
		• Injuries
		• Accidents and incidents
		• Lack of familiarity with TU Dublin work environment, work practices and emergency plans
			• Front desk manned at all times by porter
			• Visitors report to front desk
			• Safety booklets and safety wallet cards available at front desk
			• Safety signage throughout building with regard to emergency procedures
			• Hazardous/restricted areas marked with warning and PPE signs
			• Risk assessments completed for specific events where groups of visitors are expected
			• CCTV in common areas
			• Deliveries handled by Goods Inwards
			• Visitors briefed on emergency procedures by person they are visiting
					With current controls:
					1
					
					With Actions applied:
					1		

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

056	**Contractors / Service Providers**
	
	Note any contractors/service providers engaged by the School
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Unfamiliar with TU Dublin buildings and safety procedures
		• Injury to contractors, staff, students, members of the public
			• Front desk is manned by a porter
			• Contractors/service providers to sign-in at front desk
			• Contractors/service providers to complete online eLearning programme
			• Contractors/service providers to carry out risk assessments and task-specific method statements and submit to TU Dublin in advance of work being carried out
			• Deliveries handled by TU Dublin Goods Inwards Officer
					With current controls:
					2
					
					With Actions applied:
					1		

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

057	**Behaviour**
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Aggression
		• Violence
		• Stress
		• Bullying
		• Harassment
		• Noise
		• Disturbance
		• Horseplay
			• TU Dublin Dignity at Work: Anti Bullying & Harassment Policy in place
			• Employee Assistance Programme (EAP) in place
			• Occupational Stress Management Policy & Procedures in place
			• Training courses available on Stress Management, personal skills etc. to staff
			• All incidents are reported immediately
			• TU Dublin Disciplinary procedures in place
			• TU Dublin Procedure for the Resolution of Disputes/Grievances in place
				Follow procedures in TU Dublin's Dignity at Work: Anti Bullying & Harassment Policy	**With current controls:**
					3
					
					With Actions applied:
					2
						Staff and students	Ongoing

HUMAN FACTORS							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

058	**Personal Protective Equipment (PPE)**
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Improper fit and use
		• Incorrect type
		• Poor maintenance
		• Lack of training
		• Exposure to physical agents or hazardous substances
		• Slips, trips and falls
		• Lack of awareness of PPE requirements
		• Contamination
			• Appropriate selection of PPE
			• Consultation with staff on selection
			• Inspection and maintenance programme
			• Defective PPE reported and taken out of use
			• Proper storage for reusable PPE
			• Training, information and supervision in wear and use
			• Signage in place to indicate mandatory PPE
			• Follow manufacturer's instructions
			• Personal use only for hygiene reasons
			• Students provide own PPE to standard specified by School
					With current controls:
					
					With Actions applied		

CHEMICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			

059	**Chemical Agents**
	Solid/Liquid/Gas
	
	Used for cleaning optical fibers
	• Acetone
	• Ethanol
	• Methanol
	
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Skin contact
		• Inhalation of fumes
		• Ingestion
		• Fire
		• Explosion
			• Inventory kept of all chemicals in use
			• Adequate ventilation
			• Chemical agents kept in labeled containers
			• Safety data sheets (SDS) available
			• Appropriate PPE used/worn
			• First Aid kit provided in each laboratory and workshop
			• Mandatory training for staff – one day Emergency First Aid course, Chemical Safety, and Gas Safety
			• Hand- washing facilities provided
			• Eating and drinking in laboratories and workshops is prohibited
				• Maintain current controls
				
				• Develop SOP for storage and disposal of chemical agents
				• Provide safety information and training to students
				
				• Ensure supervision to confirm compliance with safe work practices
					With current controls:
					2
					
					With Actions applied
					1
						• All staff and students
						
						• Head of School
						
						Lecturing staff
							Ongoing
							
							1st October 2021
							
							Ongoing

CHEMICAL							
Ref	**Hazard**	**Risk(s) Associated / Description**	**Control Measures**		**Risk 1/2/3/4/5 Severity x Likelihood**	**Person(s) Responsible**	**Target Date / Status**
			Current Controls	**Further Actions Required**			

060	**Chemical Agents**
	Gas Cylinders
	Industrial gases in use:
	• Argon
	• Nitrogen
	Who is harmed:
	• Staff members
	• Students
	• Visitors
	• Contractors/service providers
	• Sensitive risk groups:
	  • young persons
	  • pregnant women
	  • people with disabilities
		• Inhalation of gas
		• Cold burn
		• Fire
		• Leak
		• Explosion
			• Gas cylinders are used, handled and disposed of in accordance with the supplier's Safety Data Sheet
			• Cylinders appropriately secured to prevent tipping/falling over
			• Cylinders stored in a suitable location
			• Inventory kept of all gases in use
			• Adequate ventilation
			• Safety data sheets (SDS) available
			• Appropriate PPE provided and worn
			• Warning signs in place on cylinders and at entrances to where cylinders are used and stored
			• Inspection programme for cylinders to identify defects/damage
				• Maintain current controls
				• Consider installation of a gas detection/alarm system
					With current controls:
					2
					With Actions applied
					1
						• All staff and students
						• Head of School
							Ongoing
							1st October 2021

			• First Aid kit provided in each laboratory and workshop • Mandatory training for staff – one day Emergency First Aid course and Gas Safety				

BIOLOGICAL							
Ref	Hazard	Risk(s) Associated / Description	Control Measures		Risk 1/2/3/4/5 Severity x Likelihood	Person(s) Responsible	Target Date / Status
			Current Controls	Further Actions Required			
061	Biological Agents	N/A	N/A	N/A	N/A	N/A	N/A