GENERAL RISK ASSESSMENT TEMPLATE

Work area / operation	CB11.10.403	**Assessor's name**	Yves Gayagay
Other persons consulted	Rohit Bhat, Michele Liang (Same Group)	**Date of safety assessment**	N.A
Subject Coordinator's Name	Gavin Paul	Lab Supervisor's Name	Michael Lee

ACTIVITY - Describe hazardous activities related to the work area or operation.	**ASSOCIATED HAZARDS**	**INHERENT RISK** - Harm that could occur from these hazards if controls fail or are not in place.	**EXISTING CONTROL MEASURES**	**PROPOSED CONTROL MEASURES** - Proposed action to minimise risk to an acceptable level.	**TARGET DATE** - To implement proposed controls	**RESIDUAL RISK LEVEL** (H,M,L)
Electrical cables mishandled	1: Wires everywhere 2: Insulation broken	1: Tripping onto the wires 2: Electric shock from exposed wiring and fire	1: Cable organisers 2: Test & Tag, electricians maintenance check. Fire blankets	1: Join the wires into an enclosure for minimal exposure to lose wires 2: Inform students to callout any exposed wires	1: 15/9/23 2: 15/9/23	L
Leaving the robot arm unattended	1: Robot malfunctioning 2: Robot moving on its own	1: Fires breaking out, property and personal damages 2: Property and personal damages	1: Fire extinguisher, e-stop for anyone to access 2: A control system that requires constant supervision to function the robot	1: Double check fire alarm and sprinkler system 2: Inform students to not leave the robot unsupervised.	1: 15/9/23 2: 15/9/23	L
Using inappropriate load on the robot	1: Robot arm falling out and load 2: Permanent damage to the robot	1: Personal injury and property damage, 2:Broken Robot could expose electricals to users and shock them	1: Exclusion zone from the robot 2: A user guide and training to operate the robot safely and appropriately	1: Check if there are any med kits for potential incidents 2: Implement a fine system that deters robot misuses.	1: 15/9/23 2: 15/9/23	L
Robot arm moves incorrectly	1: Robot arm going towards personals 2: Robot can spontaneously move	1: Personal injury and property damage 2: Severe personal injury and severe property damage	1: Exclusion zone, light curtains, e-stop 2: e-stop, training for emergencies	1&2: implement a wall barrier (glass) to maximise risk reduction	1: 15/9/23 2: 15/9/23	L
Incorrect manual handling	1: Posture imbalance 2: Excessive pressure on body	1&2: Back breaking and hurting.	1&2: Training on correct manual handling, team lift, tools	1&2: Have things not on the floor but onto the 'powerzone' level of the personal for ease in handling	1: 15/9/23 2: 15/9/23	L
Operating robot when tired or distracted	1: Robot moving towards unintended targets 2: Robot finding itself in gimbal lock	1: Personal injury and property damage 2: Premature wear (if excess)	1&2: Training to not operate when tired or distracted, supervision	1: Implement a heavy fine system to deter mis-using of the robot	1: 15/9/23 2: 15/9/23	L

Approval of assess	I am satisfied that the residual risk with existing controls is acceptable XYes ☐No OR	Signature	Y.G	Date	14/15/23

ment	I am satisfied that that the proposed controls will reduce risk to an acceptable level. ☐Yes ☐No				

Guidance notes for documenting General Risk Assessments

ACTIVITY

Briefly describe this hazardous work activity - E.g. Operating, Handling, Using … (Include names) of hazardous equipment, substances or materials used, and any quantities and concentrations of substance(s) or reaction products.

ASSOCIATED HAZARDS

Plant & Equipment – noise, vibration, moving parts (crushing, friction, stab, cut, shear), pressure vessels, lifts/hoists/cranes, sharps
Manual Handling – repetitive movements, lifting awkwardly, lifting heavy objects
Work Environment – moving objects, extremes in temperature, isolation, work at height, allergies to animal bedding, dander and fluids, risk of fire/explosion, slippery surfaces/trip hazards
People – potentially violent or volatile clients/interviewees
Communicable Diseases – exposure to bodily fluids/infectious materials, animal bites and scratches,
Environmental – emissions to atmosphere, discharge to soil and water bodies (including stormwater run-off), nuisance noise & odour, poor ventilation/air quality
Radiation (non-ionizing) – including lasers, microwaves or UV light
Electrical – plug-in equipment used in 'hostile' work environment, exposed conductors, high voltage equipment
Pathogens – dealings with pathogenic microorganisms such as bacteria, parasites, fungi or viruses
GMOs – dealings with genetically modified organisms
Cytotoxins – carcinogens, mutagens or teratogens
Radiation (ionizing) – Ionizing radiation source such as radioactive substance or radionuclide, or irradiating apparatus
Chemical – hazardous substances, dangerous goods, fumes, dust, compressed gas, hazardous waste

INHERENT RISK

Provide details of the harm that could be caused to people or the environment if something goes wrong.
For example: inhalation of fumes, laceration, injury to back, infection, burns to skin or eyes.
Think about what could happen if controls fail or are not in place.

CONTROL MEASURES

Note the existing and proposed actions to reduce risk to an acceptable level. Apply the "Hierarchy of Controls", listed below, when deciding the best control measure to apply. Control types closer the top of the list are preferable.

1. ELIMINATE THE HAZARD. For example: use a different less dangerous piece of equipment, fix faulty machinery, use safer materials or chemicals
2. ISOLATE THE HAZARD FROM THE PEOPLE. Separate people from the danger. For example: use shielding, use lifting equipment or trolleys, remove dust or fumes with exhaust system, lock-out machinery.
3. CHANGE THE WAY THE JOB IS DONE. For example: change work practices, provide training, information and signs, develop work procedures.
4. USE PERSONAL PROTECTIVE EQUIPMENT (PPE), noting specific PPE is required for each job. For example: respirator, hearing protection, gloves. Training and information is required for the use of PPE.

RESIDUAL RISK LEVEL (H, M, L)

Estimate risk taking into account the way the activity is run and control measures put in place. The level of risk can be determined by combining consequence and likelihood using the risk matrix from below. Residual risk should be reduced to a level acceptable by management.

CONSEQUENCE OF HARM - This is how bad it will be if something does go wrong e.g. the number of people that could be harmed, the severity of injury.

LIKELIHOOD OF HARM - Chance of harm occurring is affected by the duration of the activity and its frequency; the number of people doing the activity and the level of exposure to the hazard.

		CONSEQUENCE		
		Insignificant	Minor	Modera
	Injury/illness consequence	Non-injury incident	Injury/ill health requiring first aid	Injury/ill healt attentic
	Environmental consequence	Minor effects on biological or physical environment	Moderate short term effects but not effecting ecosystem functions	Seriou medium-t environmenta
Almost Certain	The event will occur on an annual basis	Moderate	High	High
Likely	The event has occurred several times or more in your career	Moderate	Moderate	High

LIKELIHOOD