

Program Risk Assessment

Title: STEM SHOWDOWN

Authorized By:

Page Number: 1 of 10

Risk Assessment prepared by: Liam Mudge, Ryan Ringin

Reviewed by: Albert Ferguson

Date of Assessment: 29/01/2024

Activity Type: Normal Program Activity

Due for review: January 2025

Location of Activity:	HAZARDS	Control
<ul style="list-style-type: none"> Advanced Manufacturing VR Lab 	<ul style="list-style-type: none"> Electrical Slips/trips/falls Crush Ergonomic Shear 	<ul style="list-style-type: none"> Electrical isolation Removal of hazard Training/Induction Relocate work area. Risk assessment

Based on the Risk Assessment this activities level of risk is considered:

VERY LOW

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Workflow

Identify the steps involved with carrying out the program, including the location of step, recourses & materials required, as well as any specialized personnel required for the step and identify if this is covered by a pre-existing HIRAC report. If more than one hazard exists for a single "step" select the item in the line below. Add additional steps as required.

#	Step	Location	Equipment/Materials	Specialist Personnel	Hazard	Notes
1	Introduction				Slips/trips/falls	
2	STEM is Calling	Advanced Manufacturing				
3	Microbit use		Micro:bit		Ergonomic	
4	Microscope Use		Microscope			
5	Signals					
6	m5 Stack					
7						
8	Communication is Key	VR				
9	Computer use					
10	Electronics		Wire Strippers		Electrical	Instruction & Supervision
11	Makey-Makey use		Makey-Makey			
12	Prototyping				Shear	using hand tools to prototype components
13	Tactix Case				Crush	fingers can suffer crushing damage if in case when closed.

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Chemical Hazards

Are there any chemical hazards involved with this activity?

If YES, please answer the following form.

Chemical Hazard Controls

- I have consulted the Victorian Department of Educations [Guidance Sheet 3 Prohibited and Restricted Chemicals](#).
- Banned and restricted hazardous chemicals will not be used?
- No explosive reactants will be used or explosive products generated.
- I understand the risks of the practical experiment and will undertake this practical in a 'wet area'?
- I have obtained the safety data sheets for reactants and understand the accidental spillage or exposure, emergency response and first aid information?
- Quantities of flammable reactants are kept to minimum and ignition sources are eliminated?
- All hazardous chemicals and decanted products are labelled appropriately?
- List any additional activities or equipment being undertaken/used that require an additional risk assessment to be developed

No

NA

NA

NA

NA

NA

NA

NA

NA

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If you answer 'False' to any of the above questions, do not carry out practical experiments until the matter has been resolved.

- I will **not** carry out the practical experiment if extreme or high chemical risks exist.
- I have considered all chemical exposure routes of the eyes, skin, inhalation, ingestion and injection to be used and generated.
- I have located and linked all relevant [MSDSs](#) for Chemicals used in this activity.

List the chemicals to be used and generated. Identify key hazard information from safety data sheets, control measures to be undertaken and disposal requirements.

Chemical Agent	Concentration	Flammable	Gases Under Pressure	Oxidising	Corrosive	Chronic	Health Hazard	MSDS

Products Generated	Concentration	Flammable	Gases Under Pressure	Oxidising	Corrosive	Chronic	Health Hazard	MSDS

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Risk Assessment Matrix

Assessing OHS Risks

Risk assessments in matters of Occupational Health and Safety* are based on 2 key factors:

- The severity of any injury/illness resulting from the hazard(s), and
- The likelihood that the injury/illness will actually occur.

**Assessment of risk level based on likely severity and probability of harm*

		LIKELIHOOD			
		Very Unlikely Could happen, but probably never will	Unlikely Could happen, but very rarely	Likely Could happen sometime	Very likely Could happen any time
SEVERITY	Death or permanent disability	MEDIUM	HIGH	EXTREME	EXTREME
	Long-term illness or serious injury	LOW	MEDIUM	HIGH	EXTREME
	Medical attention and short-term incapacity	VERY LOW	LOW	MEDIUM	HIGH
	First aid needed	VERY LOW	VERY LOW	LOW	MEDIUM

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EXPOSURE

Identify all groups who will be exposed to risks associated with this activity as well as any staff/specialist skills required to deliver this program e.g. Chocolate may require the assistance of some lab technician and personnel trained to operate the 3d printers/CNC machine.

- Program Staff
- Technical Staff
- Students
- Teachers

HAZARDS

- Electrical
- Slips/trips/falls
- Crush
- Ergonomic
- Shear

STEM Educator Notes	Reviewer Notes
Students completing a range of problem solving, simple electronics, prototyping and computing tasks across several workshop/sessions.	

Based on the Risk Assessment Matrix, identify the level of hazard	LOW
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RISK CONTROLS

List major hazards identified and their control measures to be implemented.

Hazards	Control	Type	Notes
<ul style="list-style-type: none"> Electrical 	Electrical isolation	Isolation	Electrical equipment complies with BTS safety standards.
<ul style="list-style-type: none"> Slips/trips/falls 	Removal of hazard		
<ul style="list-style-type: none"> Crush 	Training/Induction	Administration	Instruction process is : verbal/visual instruction, demonstration of safe process, observation/supervision.
<ul style="list-style-type: none"> Ergonomic 	Relocate work area	Elimination	
<ul style="list-style-type: none"> Shear 	Risk assessment	Administration	

Notes:

Based on the Risk Assessment this activities level of risk is considered.

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Reference Documentation

List all reference documentation, HIRACs and MSDS forms applicable to this activity. If HIRAC does not already exist, the creation of a new HIRAC may be required.

HIRACs

- [Electronics HIRAC](#)

MSDSs

-

Other Activity/Reference Material

- [Prototyping Activities Risk Assessment](#)

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Activity Approval

This activity has been reviewed and determined that it can be carried out safely. Where risks have been identified appropriately mitigation measures will be implemented.

Completed By: Liam Mudge, Ryan Ringin

Date Completed: 29/01/2024

Reviewed by: Albert Ferguson

Date for review: Jan 2025

Reviewed by supervisor, where high risks are involved.

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4. Risk Assessment Signoff

Authorised By: Albert Ferguson

Signature: Aferguson

Date: 27/02/2024

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