

HEALTH & SAFETY GENERAL RISK ASSESSMENT FORM

Date: 26 July 2022

Version No.: 1

Review Date: Annually - Jan | Apr | Jul | Sep

Authorised by: Bridgette Van Leuven

STEP 1 – ENTER INFORMATION ABOUT THE ACTIVITY/TASK, ITS LOCATION AND THE PEOPLE COMPLETING THE RISK ASSESSMENT

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|--|-----------------------------|--|------------------------------------|-------------------------------------|
| Location name: Science Gallery Melbourne venues for SWARM Drones Workshop | Building No.: 290 | Room Nos.: 290-0.1-B1103-SGM Workshop 2 290-0.1-B1105-SGM Workshop 3 !290-0.1-B1110-SGM-Black-Box-Theatre !290-0.1-B1101-SGM-PACCAR THEATRE | Assessed by: Matthew Dau | HSR/Employee representative: |
| Use of Space: All learning spaces can be used for teaching, learning and making purposes for school students and teachers. <p>STEM Centre of Excellence Workshops 2 and/or 3:</p> <ul style="list-style-type: none"> Workshop 2: up to 35 School Students with School Staff supervision in line with Education Vic. expectations, OR up to 35 Attendees Workshop 3: up to 35 School Students with School Staff supervision in line with Education Vic. expectations, OR up to 35 Attendees Workshop 2 and 3: up to 50 School Students with School Staff supervision in line with Education Vic. expectations, OR up to 50 Attendees <p>Black Box Theatre:</p> <ul style="list-style-type: none"> Black Box Theatre: up to 50 School Students with School Staff supervision in line with Education Vic. expectations, OR up to 50 Attendees <p>PACCAR Theatre:</p> <ul style="list-style-type: none"> PACCAR Theatre: up to 50 School Students with School Staff supervision in line with Education Vic. expectations, OR up to 50 Attendees <p>Course Description (Students will):</p> <ul style="list-style-type: none"> Learn how to code a drone to complete flying patterns through a series of activities of increasing complexity. Utilise geometry and measurement skills. Work as a team to determine the best route to complete an obstacle course, and code a drone to do so. Explore the applications of drones across agriculture, health, engineering, entertainment and more. | | | | |
| Workplace conditions (Describe layout and physical conditions - including access and egress): <ul style="list-style-type: none"> Depending upon the learning program, the rooms have various layouts for activities, demonstrations and forums. The spaces have been designed to be flexible and adaptable to accommodate a number of learning programs with diverse engagement. 290-0.1-B1103-SGM Workshop 2 and 290-0.1-B1105-SGM Workshop 3 can either be one large space accommodating up to 130 students or divided into two separate spaces that can host 60 students (Workshop 3) and 70 students (Workshop 2). A foldout panel door divides the two workshop spaces, requiring two people to maneuver the panels into position (east to west). The final piece of the door | | | | |

panel is part glass allowing observation in both workshops which closes (west to east) automatically and secures the wall. One entrance/exit glass door is located in each workshop space with the capacity to be accessed with a swipe pass or programmed to be opened for general public access. Each workshop space has a lectern and automatic screen with access to large storage cupboards that are not currently secured. Technologies such as laptops are stored in lockable trolleys located in the storage cupboards. The flooring of the workshop spaces is a sealed cork material with wood panels on all sides of the rooms, including storage cupboards.

- 290-0.1-B1103-SGM Workshop 2: Please note this space includes the view of the oculus window allowing natural light into the space and has an additional kitchenette located at the front of the room behind storage cupboard doors. A sink with hot and cold water and a shelf is also located here. In addition, Workshop 2 has the IT switchboard located in the storage cupboards.
- !290-0.1-B1110-SGM-Black-Box-Theatre is one large space that has a stage and large floor space that can be configured into a lecture style with chairs, or workshop style with tables and chairs.
- !290-0.1-B1101-SGM-PACCAR THEATRE is a bleacher-style presentation space that hosts approximately 70 comfortably.
- The shared public toilets are located down a separate corridor on the same level as the SCoE workshops, requiring teachers to accompany students to the toilets for duty of care purposes.
- All spaces are airconditioned but currently require air quality checking with student usage for correct ventilation levels.
- Workshop furnishings: 5–10 students can sit in groups around connected tables making, experimenting, writing, drawing and or using technologies at certain desks. Equipment cupboards on wheels are in easy-to-reach and accessible places in the room with lounges available for breakout discussions. Standard laptops on secure charges are also available for students to utilize and are managed by the SCoE staff to access.

List systems of work for the activity/task:

- Emergency situations
- Existing controls
- Inspections
- SOPs
- Training

Emergency situations:

- Facilitators will follow the University’s [Emergency Response Procedures](#) in the event of an emergency situation. A flipchart will also be available at the SGM front receipt.

Existing controls:

- The titled Learning Experience is offered to:
 - (up to) 25 students at one time, with school staff supervision in line with [Education Vic. expectations](#), and a minimum of 1 VIT Teacher or Facilitator inclusive.
 - (up to) 50 students at one time, with school staff supervision in line with [Education Vic. expectations](#), and a minimum of 2 VIT Teacher or Facilitator inclusive.
- The module is offered in a controlled environment where the use of equipment and utensils is demonstrated.

Inspections:

- The titled Learning Module was trialed and evaluated prior to the first program with students to ensure that any problems or risks were identified and could be controlled/solved.
- OHS management will access the risk assessment to ensure all risks and controls have been identified.

SOPs:

- Standard Operating Procedure (attached) includes a summary risk assessment of the activities being provided to schools prior to engagement, to allow schools (who take the risk of the excursion and duty of care of students) to be aware of what operating procedures they need to follow to comply with DET policy.
- Following, we have listed any ingredients or materials that students will be using as part of this Learning Experience. This list is communicated to Teachers prior to attending the Learning Experience. We ask that teachers check this list and notify us of any allergies that would present a risk for students or teachers.

Training:

- VIT Teacher and Facilitators have experience in delivering experiments with variables and ratios of ingredients and materials listed following.
- VIT Teacher and Facilitators have experience in using equipment and tools listed following.

Is there past experience with the activity/task that may assist in the assessment?

- This is a new learning module being delivered in 2022 and will set the precedent for future assessments.

- Workshops will be reviewed following each delivery, and insights actioned, where useful.

STEP 2: RISK RATING – RISK MATRIX AND DEFINITIONS

| Likelihood | Consequence | | | | | |
|----------------|-------------|---------------|--------|----------|---------|---------|
| | | Insignificant | Minor | Moderate | Major | Severe |
| Almost certain | | Medium | High | High | Extreme | Extreme |
| Likely | | Medium | Medium | High | Extreme | Extreme |
| Possible | | Low | Medium | Medium | High | Extreme |
| Unlikely | | Low | Low | Medium | High | High |
| Rare | | Low | Low | Low | Medium | High |

Likelihood

Almost certain – will occur in most circumstances when the activity is undertaken (greater than 90% chance of occurring)

Likely - will probably occur in most circumstances when the activity is undertaken (51 to 90% chance of occurring)

Possible – might occur when the activity is undertaken (21 to 50% chance of occurring)

Unlikely – could happen at some time when the activity is undertaken (1 to 20% chance of occurring)

Rare – may happen only in exceptional circumstances when the activity is undertaken (less than 1% chance of occurring)

Consequence

Insignificant – First aid treatment, minor injury, no time off work

Minor – Single occurrence of medical treatment, minor injury, no time off work

Moderate – Multiple medical treatments, non-permanent injury, less than 10 days off work

Major – Extensive injuries requiring medical treatment (e.g. surgery), serious or permanent injury/illness, greater than 10 days off work

Severe – Severe injury/illness requiring life support, actual or potential fatality, greater than 250 days off work

Risk Rating Priority for Action

| | Risk acceptance guide | Action | Recommended action time frame |
|---------|--|---|-------------------------------|
| Extreme | Not acceptable | Cease or isolate source of risk | Immediate |
| | | Implement further risk controls | Up to 1 month |
| High | Generally (in most circumstances) not acceptable | Monitor, review and document controls | Ongoing |
| | | Implement risk controls if reasonably practicable | 1 to 3 months |
| Medium | Generally (in most circumstances) acceptable | Monitor, review and document controls | Ongoing |
| | | Implement risk controls if reasonably practicable | 3 to 6 months |
| Low | Acceptable | Monitor and review | Ongoing |

STEP 3 – IDENTIFY HAZARDS AND ASSOCIATED RISK RATINGS AND CONTROLS

For each of the following prompts:

- Review the prompts/examples for each hazard that may potentially exist for the activity/task;
- Determine and record an inherent risk score by using the risk matrix;
- In the comments box, describe when and where the hazard is present;
- Specify the risk control type, for each current or proposed risk control;
- Provide a control description for each inherent or proposed risk control;
- Where proposed risk control(s) have been identified complete an [Health & Safety: Action plan](#);
- Determine the residual risk score using the risk matrix

Hierarchy of Control (Control Type):

- A – Administrative
- EI – Elimination
- En – Engineering
- G – Guarding
- H – Health Monitoring
- In – Inspection
- Is – Isolation
- M – Monitoring
- P – PPE
- S – Substitution
- Sh – Shielding
- T – Training

| Take Flight | Inherent Risk Score | Comments (when/where hazard is present) | Control Type | Control Description (Current and Proposed) | Residual Risk Score |
|---|---------------------|--|--------------------------------|--|---------------------|
| Physical Hazard Identification | | | | | |
| Potential for: Improper use of tools leading to injury (cut, stab, struck, burn etc.) | Low | <ol style="list-style-type: none"> 1. Cut or stab from improper use of stationary (tape measures etc.). 2. Injury from tools that are not in good working quality (damaged parts, electrical components etc.) | A EI In M T | <ul style="list-style-type: none"> • This Risk Assessment is completed to identify tools and related processes with a high likelihood of injury. • Tools with a high likelihood of injury are reserved for use by facilitators. This is communicated to students. • Facilitators demonstrate and encourage safe use of tools for student use, with hazards identified and communicated. • Running water station and first-aid kit available for treatment of burns, cuts, and general injuries. • Facilitators inspect tools prior to workshops to ensure they are in proper working order. | Medium |
| Potential for: Improper use of equipment leading to injury (cut, stab, struck, burn etc.) | Medium | <ol style="list-style-type: none"> 1. Injury from interaction with motorised equipment (robotics, propellers, motors etc.) (catching of hair, striking or catching of skin, striking of eyes etc.). 2. Injury from equipment that is not in good working quality (damaged parts, electrical components etc.) 3. Burns or injury from interactions with batteries. 4. Fire or injury sustained, resulting from improper storage of equipment. | A EI In M PPE T | <ul style="list-style-type: none"> • This Risk Assessment is completed to identify equipment and related processes with a high likelihood of injury. • Equipment with a high likelihood of injury is reserved for use by facilitators. This is communicated to students. • Facilitators demonstrate and encourage safe use of equipment for student use, with hazards identified and communicated. | Low |

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| | | | | <ul style="list-style-type: none"> Rechargeable batteries are stored in a secure location, inside fire-proof bags. It is communicated to students that only Facilitators are to handle rechargeable batteries. Where students interact with motorised equipment (incl. propellers, motors etc.), students are required to tie back any long hair. Where students interact with free-moving, airborne motorised equipment, students are required to wear safety glasses. Large pieces of equipment are kept on slip-resistant mats if they do not have slip-resistant footings of their own. Any equipment with exposed heating elements is controlled, by Facilitators. Running water station and first-aid kit available for treatment of burns, cuts and general injuries. Facilitators inspect equipment prior to workshops to ensure they are in proper working order. Electrical equipment is 'tested and tagged', and maintained, in line with University of Melbourne requirements. | |
| Potential for: Exposure to chemicals, solutions, offcasts leading to injury (burn, irritation, inhale etc.) | | NA | A | <ul style="list-style-type: none"> This Risk Assessment is completed to identify actions and related processes with a high likelihood of injury. Actions with a high likelihood of injury are removed from this Learning Experience. | Low |
| Potential for: Strain or ergonomic injury caused by working at table-height for extended periods. | | <ol style="list-style-type: none"> Injury sustained through repetitive tasks. Injury sustained through extended periods working at inappropriate work-heights. | A EI En | <ul style="list-style-type: none"> This Risk Assessment is completed to identify actions and related processes with a high likelihood of injury. Facilitators demonstrate and encourage safe use of equipment and tools for student use, with hazards identified and communicated. Repetitive physical tasks are limited to no more than 10 minutes. Appropriate workbench heights are available and matched to students work. Automated/motorized equipment is identified for large volumes of work | Low |
| Environmental Hazard Identification | | | | | |
| Potential for: Exposure to chemicals, solutions, | | 1. Trip or fall caused by the placement of | A | <ul style="list-style-type: none"> This Risk Assessment is completed to identify | Low |

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| offcasts and/or fumes leading to injury (burn, irritation, inhale etc.) | | furnishings and other objects (carpeting, equipment etc.). 2. Slip, trip or fall caused by spills of mixtures or materials. | EI H PPE T | <p>processes with a high likelihood of injury.</p> <ul style="list-style-type: none"> • Actions with a high likelihood of injury are removed from this Learning Experience. • All furnishings shall be above a height of 40cm. • Where any objects or equipment sit at a height of under 40cm, they are identified as hazards to students, and visual aids are added to increase visibility. • Spills of mixtures or materials are cleaned immediately. Brooms and mops are available, and cones or markers are used to identify potential hazards. • Light levels are controlled and adjusted by Facilitators to ensure clear visibility of potential hazards. | |
| Other Hazard Identification | | | | | |
| Potential for: Contamination of food items. | | 1. Contamination of food items caused by improper use of tools or unhygienic practices. | M | 1. Facilitators demonstrate and encourage safe use of equipment and tools for student use, with hazards identified and communicated. | |
| Potential for: Anaphylactic reaction to materials. | | 2. Allergy or anaphylactic reaction to organic compounds (known allergen). 3. Allergy or anaphylactic reaction to organic compounds (unknown allergen). | A T | 2. School staff are required to provide any known allergen information in advance of learning experiences. Any identified allergens will be removed. 3. General use EpiPens are available in first aid kits for application by trained School Staff. | Low |
| Potential for: Anaphylactic reaction to ingesting foods or substances. | | 1. Allergy or anaphylactic reaction to organic compounds (known allergen). 2. Allergy or anaphylactic reaction to organic compounds (unknown allergen). | A T | 1. School staff are required to provide any known allergen information in advance of learning experiences. Any identified allergens will be removed. 2. General use EpiPens are available in first aid kits for application by trained School Staff. | Low |
| General & Venue-specific Hazard Identification | | | | | |
| COVIDSafe Concerns | Likely Medium | <ul style="list-style-type: none"> • Concerns that COVIDSafe procedures are not being followed. • Some visitors may have hygiene concerns (e.g. COVIDSafe concerns) related to use of equipment or spaces by multiple visitors. | PPE T H | <ul style="list-style-type: none"> • Science Gallery Melbourne follows the COVIDSafe practices of the University of Melbourne which reflect the State Government of Victoria's DHHS requirements. • Staff will monitor the flow of students within the workshop spaces and provide ample space to carry out the workshop activities. • Hand sanitizer and sanitizing wipes will be provided in the workshop spaces. • Workshop furniture and high-touch surfaces are cleaned regularly by University of Melbourne cleaners, and facilitators will ensure workshop materials are clean for use by students | Medium |

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| | | | | <ul style="list-style-type: none"> Teachers and students can advise staff of any concerns they have. | |
| <p>Transport: Private Bus drop-off location Private buses have permission to utilize Gratton Street PT Bus Stop to pick up and drop off SGM school groups, which is located on northern side of Gratton Street, 20 meters from Corner of Gratton & Cardigan Street. Schools walk 20 meters towards Swanston Street and enter Science Gallery Melbourne, Gratton Street main entrance. See Google Maps location here.</p> | Unlikely Minor | <ul style="list-style-type: none"> Large school groups may be queued or unable to disembark the bus safely if arrive at the same time as only space for one bus to drop off. Bus stop provides wet weather shelter for only 5 people, so some may have concerns waiting in bad weather. | M | <ul style="list-style-type: none"> Large school groups travelling in 1-3 buses can stagger their drop off and pick-up times. Science Gallery Melbourne Learning staff can assist teachers with pick up and drop off duties with large groups. Timed drop off and pick up bus scheduling required for large groups approx. 5 mins apart. Teachers and students can wait in the entrance foyer to SGM in case of bad weather or if that is their preference | Low |
| <p>PACCAR Theatre: bleachers & stairs connecting ground floor to basement 32 stairs leading to basement floor but also to sit on 12 bleachers participating in forums/lectures. Approximately 750mm deep.</p> | Unlikely Moderate | <ul style="list-style-type: none"> Vertigo may arise due to depth of bleachers and stairs to basement. Visitors do not use handrail when using staircase and may trip. Corners of bleachers are designed with sharp edges which may cause cuts if visitor falls. Visitors use the 12 bleachers as steps rather than the staircase with handrail to access basement or ascend to ground floor and could fall or trip. People with wheelchairs and students with mobility challenges have access to lift to basement floor via ramp to enable seating for forum or lecture. Infra-Red (IR)Hearing Assist installed for people with hearing impairment or who are deaf. IR User Head Sets available from reception. | M S | <ul style="list-style-type: none"> Visitors will be asked to use staircase with handrail to access the bleachers. Visitors with mobility challenges will be assisted by staff, where required. Teachers may warn visitors who experience vertigo to use lift. | Low |
| <p>Public lift on northern side of gallery entrance (near central Oculus courtyard) Lift offers access from ground floor to upper floor, basement level and Melbourne Connect Super floor access. People who use a wheelchair and students with mobility challenges can access the lift via ramp from ground floor direct to lift.</p> | Unlikely Minor | <ul style="list-style-type: none"> Lift breaks or is out of use and a student or teacher requires the use of lift to access basement workshops and toilets. Students access the public lift without a teacher present and have a negative interaction with public member Lift stops operating and visitors are trapped. | M | <ul style="list-style-type: none"> School visitors using lift should have a teacher and SCoE staff member to assist navigation. If lifts are not operating, there are other lifts available that staff can advise. An alarm button and speaker is inside the lift to talk directly to security. | Low |

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| STEM Centre of Excellence Workshop 2 & Workshop 3: Usage of laptops for workshop activities. | Unlikely Moderate | <ul style="list-style-type: none"> Musculoskeletal disorders/injuries, including overuse injuries, due to: inappropriate workstation layout and design unsuitable computer-based equipment and/or office furniture long periods of computer use without breaks | T M | <ul style="list-style-type: none"> Scheduled workplace inspections. Purchase and use of suitable equipment and office furniture. Task variety and regular short defined breaks during data entry. Additional support and resources during increased workloads. | Low |
| General office environment | Unlikely Minor | <ul style="list-style-type: none"> Poor housekeeping and storage arrangements: accumulation of rubbish tripping of inappropriately placed items (e.g. electrical power cords) damaged power cords blocked emergency exits overloaded shelving bumping/walking into opened cupboards and drawers | T M In | <ul style="list-style-type: none"> Scheduled workplace inspections Regular rubbish removal Worker training Running electrical power cords away from walkways Testing and tagging of electrical equipment | Low |
| Accessing the workshops | Unlikely Minor | <ul style="list-style-type: none"> Unknown individual enters workshops and it results in: <ul style="list-style-type: none"> theft property damage psychological or physical injuries | G M | <ul style="list-style-type: none"> Students will be required to be always supervised in the workshop spaces by teachers. When workshop spaces are not in use, it will be locked so access is only via electronic access e.g. swipe card system. Staff training and induction includes local emergency procedures so staff are able to respond accordingly. | Low |
| Use of workshop kitchen facilities | Unlikely Moderate | <ul style="list-style-type: none"> Poor housekeeping Burns from boiling water Cuts from kitchen cutlery Liquid spills Electrocution/electric shock from electrical appliances Kitchen fire Cleaning chemicals | M T | <ul style="list-style-type: none"> Include kitchen facilities in scheduled office workplace inspections Place boiling water appliances at working height Non-drip taps on boiling water appliances Testing and tagging of electrical equipment Fire extinguisher First aid kit Trained first aider Floor warden Worker training and induction that includes local emergency procedures Clean up kitchen spills immediately SDS for cleaning chemical | Low |

Workshop Materials List

Tools:

- Pens
- Tape Measure

Equipment:

- Tello drones (incl. propeller guards)
- Laptops

Materials:

- Paper
- Rubber Flooring tiles
- Timber disks

STEP 4 – IMPLEMENTATION AND CONSULTATION PROCESS

Determine the person responsible for reviewing and implementing the risk assessment including the identified controls. Ensure a [Health & Safety: Action plan](#) has been completed, reviewed and signed off where proposed controls have been identified.

Obtain the authorisation of the management representative.

Ensure the HSR (if applicable) has been consulted. Ensure the employees undertaking the activity have been consulted.

Record below the names of the persons consulted.

| | | | |
|---|----------------------|-----------------------------|-------------------|
| Management representative | Bridgette Van Leuven | HSR/Employee representative | |
| Employee(s) | Matthew Dau | Employee(s) | Vhairi Mackintosh |
| Employee(s) | Tara Storey | Employee(s) | |
| Person Responsible for implementation or escalation | Lee Casey | | |

Extra writing room - use this page to enter extended comments or descriptions

For use in conjunction with the [Health & Safety: Risk management requirements](#).

For further information, refer to <http://safety.unimelb.edu.au/management/implement> or contact your [Health and Safety Business Partner](#).