Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Yarra Ranges Tech School (L3)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Arrival & Departure	• Traffic on Jarlo Drive	• Vehicles drive through next to the bus drop-off area.	• Teachers supervise students moving into and out of the building and from the building to bus parking • Schools follow their Excursion policy whilst in transit	LOW
Internal movement around the Tech School	• Slips and trips	• Slip/trip/fall	• Teachers are to always supervise students in the Tech School. • Non-slip flooring and stair strips • Regular inspections of all public areas by OHS Representative	LOW
Bag Storage	• Lost Property	• Lost Property • Fingers or hands can get pinched in locker doors	• Bags are to be placed into assigned bag storage at the start of the day • Students are to be vigilant of moving parts • Students may need to share the supplied bag storage space with other schools • The Tech School takes no responsibility for items lost, damaged or stolen	LOW
Catering	• Duty of Care • Allergies & choking	• Café is next to Tech School site in building L5 • Slip/trip/fall	• Duty of Care remains with teachers • Teachers should carry relevant anaphylaxis and / or asthma action plans and associated medications • Recommend Students bring their own lunch/snacks • Well-maintained stairs with anti-slip edges • Marked pedestrian crossings and reduced speed limit at BHI	LOW
Break facilities downstairs in building L3	• Burns / cuts • Interaction with public	• Burnt by hot food or appliances • Food Contamination	• Recommended that students bring their own lunch • Only use appliances if they must and know how to safely • BHI students also use this space between classes to eat food	LOW
Equipment	• Use Cuts, Burns, flying objects	• Risk can vary depending on the equipment used, each piece of equipment has a separate Risk Assessment.	• Safety induction delivered to the whole class at the beginning of the day • Training on equipment provided to students when they use the equipment for the first time. • Incorrect use will lead to removal from activity	MEDIUM
Toilet facilities	• Other adults, students in building • Slip/trip/fall	• Shared toilet facilities in Tech School	• All students, teachers in Tech School are registered with adults having a WWCC or VIT registration • Multiple schools might be present in the Tech School on any day – breaks are staggered to minimise congestion	LOW
Room Specific	• Unsupervised Injuries	• Preventable injuries due to lack of supervision	• Visiting teachers supervise students during break time	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

			• Practical Rooms must have a tech school staff member present unless otherwise specified	
Emergency	• Building Evacuation	•	• Students remain in supervision of teacher with their class list • Participants to be briefed on emergency procedures at the beginning of the day • Teachers and students to follow the Emergency Wardens instructions when prompted	LOW
All Activities	• General First Aid	• Asthma, Allergies and anaphylaxis	• Schools are expected to bring their own first aid kit from school to meet the needs of their students and participants. However, BHI also has First Aid trained staff and equipment including a Defibrillator • Students must wear enclosed toed footwear to Tech School programs • A teacher from the visiting school is required to bring the individual allergy management plan, carry the necessary medications and be trained to use such medications	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Virtual Reality Room (L3.G22/23)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using VR	• Electrical	• Damaged or frayed electrical cables	• Training provided for all on the safe operation of VR controls and system features • Operator to check for damaged electrical cords prior to use. • Ensure equipment is regularly serviced, tested and tagged • No food or drink in VR lab	LOW
Using VR	• Slips • Trips • Falls • Collision	• Fall / collide with bystanders or obstacles	• Training provided for all on the safe operation of VR controls and system features • Interactions with virtual and real-world obstacles may result in the user losing balance or colliding with obstacles. Such as chairs, tables, and other furniture. • Keep VR activity space clear of clutter with ample space between VR headsets to allow a safe boundary. • Spotters used to make sure user does not collide with obstacles.	LOW
Using VR	• Entanglement	• Entangle by cables, hair, clothing	• Training provided for all on the safe operation of VR controls and system features • Loose clothing, jewellery should be removed with long hair tied up out of the way before using VR. • Spotter used to assist to make sure user does not get tangled.	LOW
Using VR	• Health	• Photosensitivity • Disorientation while using VR • Shared use of VR headsets / user contamination	• Users advised to take breaks and be seated if feeling unwell • Adequate warnings and training about the warning signs for “cyber sickness” and photosensitivity (particularly epileptics) • Limit time users occupy VR environment to avoid cyber sickness. • Regular cleaning and disinfectant procedures for VR headsets	MEDIUM
Using VR	• Ergonomic	• Potentially high amount of musculoskeletal strain	• Encourage participants to stop, rest and/or stretch if uncomfortable • Limit the amount of time on VR to reduce exposure to repetitive movement	LOW
Using gaming laptops	• Electrical hazards	• Electric shock • Overheating	• Regular inspection of power cables and outlets • Laptops placed on stable surfaces with ventilation • Proper cable management to avoid tripping hazards • Regular breaks and varied activities to prevent eye strain	LOW
Sitting on desk chairs	• Risk of falls • Back strain	• Falls	• Chairs with locked wheels when in use • Ergonomic setup guidelines for chair height and posture • Regular breaks to prevent strain from prolonged sitting	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Using Drones in Exhibition Space (L3.G03)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Flying drones in exhibition space	• Electricity	• Damaged or frayed electrical cables	• Training provided for all users on the safe operation of the drone controls and system features • Operator to check for damaged electrical cables in area prior to use. • Ensure equipment is regularly serviced, tested and tagged	LOW
Flying drones in exhibition space	• Entanglement	• Long hair, loose clothing, jewellery	• Loose clothing, jewellery should be removed with long hair tied up out of the way before using drones.	LOW
Flying drones in exhibition space	• Slips • Trips • Falls	• Fall / collide with bystanders or obstacles	• Untidy workspace with obstacles in the exhibition space may result in a trip hazard. • Drones may travel to other users' space, causing a trip / air hazard.	LOW
Flying drones in exhibition space	• Impact injuries	• Drones may collide with users or observers in the work area.	• Training provided for all users on the safe operation of the drone controls and system features • Ensure operator's hands and body parts are kept clear of moving parts during use and maintenance. • Do not use damaged components/tools • Users to follow safety protocols and not fly near people or too high near the lights / roof.	LOW
Using iPads	• Prolonged screen time and close-up work	• Eye strain, headaches when coding or drawing	• iPad's built-in blue light filter and brightness adjustment • Short video on Moodle to guide students on coding – hard copy also available	LOW
Using iPads	• Repetitive motions	• Wrist, hand, or arm pain	• Basic coding completed in small groups • Ergonomic iPad pencils and stands provided	LOW
Using AI	• Copyright issues	• Unintentional copyright infringement	• Awareness and following of DET safe AI usage policy • Clear guidelines on appropriate content creation and copyright • Students taught the ethical use of AI in art and potential biases	LOW
Using AI	• Random content generation	• Accidentally generating inappropriate content	• AI programs we use 'Leonardo' and Adobe Firefly' have under 18 filter • Students taught to use specific prompts when learning to use AI • Guidance and constant supervision • Content modification	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Laser Cutting Room (L3.G13)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using the laser cutter	• Electricity	• Exposure to invisible laser beam – burns, cuts or blindness	• Training provided for all on the safe operation of the laser cutter controls / features • Students to be supervised at all times • Check machine, including lid, for damage before turning power on • Press “Pause” or “Stop” before lifting lid, even in the event of an emergency • Operator to check for damaged electrical cables prior to use. • Ensure equipment is regularly serviced, tested and tagged	LOW
Using the laser cutter	• Crush / cutting injuries	• Failure of mechanical parts may result in exposure of operator / bystanders to laser or mechanical impact.	• Only have one person operating the machine at any one time. • Ensure unit operated in accordance with manufacturer’s instructions. • Ensure workpiece appropriately secured while unit operating • Ensure workspace is clear at all times	LOW
Using the laser cutter	• Risk of burns	• Materials catching fire	• Don’t cut highly flammable materials • Don’t leave the machine unattended and always watch for flames developing. • Have a fire extinguisher nearby in case of fire. • Regularly service machine	MEDIUM
Using the laser cutter	• Fumes from materials being cut	• Poisoning/gassing • from fumes.	• Ensure fume filter is operational • Users / bystanders to wear appropriate PPE face masks • If the operator starts to feel unwell or become aware of smells in the atmosphere around the machine, they should stop the machine immediately • Materials which produce dangerous/damaging fumes should never be cut • Ensure appropriate control measures are implemented (e.g. exhaust system, face masks, tidy workspace etc)	MEDIUM
Using the laser cutter	• Entanglement	• Long hair, loose clothing, jewellery	• Training provided for all on the safe operation of the laser cutter controls / Loose clothing, jewellery should be removed with long hair tied up out of the way before using laser cutter.	LOW
Using the laser cutter	• Noise	• Excessive noise levels	• If operating for an extended period, use hearing protection. • Turn off extraction systems when not required.	LOW
Using the laser cutter	• Slips • Trips • Falls	• Build-up of waste material or failure to clean up straight after use	• Ensure appropriate cleaning and housekeeping practices are maintained to minimise the risk of a slip, trip or fall. • Workspace inspected and cleared of any off cuts / unnecessary objects before and after use.	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

Cutting VEX robotic metal	• Injury from tools or particles • Sharp edges	• Injury from cutting tool • Metal shard or particles • Sharp edges on metal pieces • Inhalation of metal dust	• Use of PPE: gloves, goggles, long sleeves, and protective footwear. • Regular inspection and maintenance of cutting tools to avoid malfunctions. • Proper training on the safe use of cutting tools and handling metal pieces. • Ensure the work area is well-ventilated and equipped with a stable, safe work surface.	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	3D Printing (L3.G18/G19)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using the 3D printers	• General 3D printing safety	• Unsafe operation • Injury • Fire hazard	• Ensure all users know how to operate the printer safely • Fire extinguisher and first-aid kit available • Constant supervision for students / inexperienced users	MEDIUM
Working with hot printer components	• Burns from touching hot surfaces (nozzle, bed, extruder)	• Burns or injury to skin	• Safety briefing before use with warning signs in area • Used under constant supervision • Allow cooling time before handling – nozzle, bed, extruder	MEDIUM
Working with 3D printers moving parts	• Pinching • Crushing injuries	• Injury from moving parts	• Keep hands away during operation • Keep doors closed during operation	LOW
Exposure to fumes from printing materials (PLA, ABS, Resin, etc.)	• Respiratory irritation • Headaches	• Health issues from fumes	• Use in well-ventilated areas • Use with in-built fume extractors • Avoid using toxic materials like ABS	MEDIUM
Electrical faults in 3D printing	• Electric shocks • Fire hazards • Short circuits	• Electrical injury • Fire • Equipment damage	• Regular inspection and maintenance • Avoid leaving printer unattended while in operation • Use fire-resistant surfaces for equipment	MEDIUM
Sharp edges on 3D printed objects	• Cuts • Puncture injuries	• Injury from sharp edges	• Post-processing (sanding edges) • Use gloves if necessary	LOW
Handling resin (in resin printers)	• Skin irritation • Chemical exposure	• Dermatitis • Burns	• Wear gloves and safety glasses • Wash hands thoroughly after handling	MEDIUM
3D printing material jam or printer malfunction	• Overheating • Printer damage • Fire risk	• Malfunction • Fire hazard	• Follow manufacturer guidelines for operation and maintenance • Stop operation immediately if malfunction occurs	MEDIUM
Handling electrical cables above worktables	• Electrical hazards • Cables interfering with work activities.	• Electrical shock from exposed wires or damaged cables.	• Cable management system to secure electrical cables above the worktables and prevent them from hanging loosely. • Inspection of cables for damage or wear, and replacement of any frayed or exposed wires. • Regular checks to ensure cables are securely attached.	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	3D Printing (L3.G18) and Nursing (L4.215)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Tour of the nursing lab	• Slips, trips and falls	• Minor injuries such as sprains, bruises	• Clear walkways, supervision by staff, safety briefing before entry	LOW
Use of CPR training dummies	• Poor lifting technique or inappropriate use • Hygiene concerns	• Muscle strain, back injury • Spread of germs if dummies not cleaned between uses	• Demonstration of correct technique, staff supervision, use of lightweight dummies • Dummies cleaned between users; hand sanitiser provided	LOW
Taking vital signs (blood pressure)	• Incorrect use of equipment • Student anxiety / discomfort	• Discomfort or minor injury from over-inflation of cuff • Emotional distress, dizziness from being the subject of demonstration	• Instruction and supervision by trained staff, use of automatic BP machines • Participation optional, seated measurement, students can opt out at any time	LOW
Use of "Glitter Bug" handwash	• Skin sensitivity / allergy • UV light exposure	• Skin irritation or rash • Eye strain or temporary discomfort	• Patch test available, wash-off stations available, supervision • Brief exposure only, warning to not look directly into UV light	LOW
Use of hand sanitiser	• Skin sensitivity/allergy	• Skin irritation or rash	• Option to use soap and water instead, only approved hand sanitisers used	LOW
Use of stethoscopes	• Shared equipment hygiene • Incorrect placement or pressure	• Spread of germs or infections via shared earpieces • Discomfort to the person being examined	• Alcohol wipes to clean between uses, hand hygiene before and after use • Staff supervision, gentle use demonstrated, students instructed on correct technique	LOW
Use of pulse oximeter readers	• Incorrect use of equipment • Pinching or discomfort from clip • Shared sensor surfaces	• Inaccurate readings, confusion or concern over normal fluctuations • Minor discomfort on finger • Transmission of germs via finger sensor	• Staff guidance, explanation that results are for demonstration only • Instruction to remove immediately if uncomfortable • Sensor cleaned with alcohol wipes between uses, hand sanitiser available	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Assorted technology at YRTS
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using iPads	• Prolonged screen time and close-up work	Eye strain, headaches	• iPad's built-in blue light filter and brightness adjustment • Short video on Moodle to guide students on coding – hard copy also available • Regular breaks from technology	LOW
Using iPads	• Repetitive motions when drawing or coding	Wrist, hand, or arm pain	• Basic coding completed in small groups • Ergonomic iPad pencils and stands provided	LOW
Using AI	• Unintentional copyright infringement		• Awareness and following of DET safe AI usage policy • Clear guidelines on appropriate content creation and copyright • Students taught the ethical use of AI in art and potential biases	LOW
Using AI	• Data privacy	Exposure to offensive material	• AI filtering for under 18s • Guidance and constant supervision • Content modification	MEDIUM
Use of YRTS laptops	• Physical hazards: • Hanging/loose cables • Opening/closing lids	Trips, falls, pinches, sprains, other injuries	• Cable management, keep laptops and charges away when not in use • Ensure equipment is regularly serviced, tested and tagged	LOW
Use of YRTS laptops	• Electrical	Sparks, short circuits, damage to equipment, electrocution	• No food or drink in VR lab • Store laptops and charges away when not in use • Ensure equipment is regularly serviced, tested and tagged	LOW
Use of YRTS laptops	• Eye Fatigue	Eye strain, headaches	• Regular breaks from technology	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Robotics Room (L3.G20)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using VEX IQ Equipment	• Moving parts • Electrical batteries and components • Programming incorrect code	• Pinching or entanglement • Short circuits • Overheating • Unpredictable robot behaviour or collisions	• Train all users in operating VEX equipment safely • Inspect parts regularly for damage or wear • Use guards for moving parts • Handle batteries carefully • Test code in controlled environments	MEDIUM
Using VEX V5 Equipment	• Moving parts • Powerful motors • Electrical batteries and components • Programming errors	• Pinching or entanglement • Damage to equipment • Fire hazard • Overheating • Unpredictable robot behaviour or collisions	• Train all users in operating VEX equipment safely • Inspect parts regularly for damage or wear • Use guards for moving parts • Handle batteries carefully • Ensure proper insulation and secure connections • Test code in controlled environments	MEDIUM
Use of YRTS laptops	• Physical hazards: • Hanging/loose cables • Opening/closing lids • Electrical	• Trips, falls, pinches, sprains, other injuries • Short circuits • Equipment damage • Electrocution	• Cable management, laptops/ chargers away when not in use • Ensure equipment is regularly serviced, tested and tagged • No food or drink in robotics room • Store laptops and charges away when not in use • Ensure equipment is regularly serviced, tested and tagged	LOW
VEX competition or event	• Trip or slip hazards – uneven surfaces, extension cords • Electrical • Collisions – people, chairs, equipment	• Falls, bruises, cuts sprains, head trauma • Electric shock or fire • Equipment damage	• Use cable management systems • Always have an experienced supervisor present • No food or drink allowed in the competition/event space • No shoes allowed on competition field • Encourage safe behaviour in competition space • Monitor the competition/event space for trip hazards, electrical risks or potential collisions	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Media Studio (L3.G04)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Working with cameras	• Dropping the camera • Improper handling • Camera-related malfunctions	• Injury from dropping or mishandling the camera (e.g., strain, cuts) • Damage to camera equipment • Eye strain from looking through the viewfinder for extended periods	• Clear instructions on how to handle and set up cameras • Training on the correct ergonomic handling • Use of camera straps/ supports to prevent drops • Regular maintenance checks on equipment • Supervision while students handle cameras	MEDIUM
Using camera equipment (Tripods, Gimbals, Microphones)	• Tripping, falls, or injury from improperly set up equipment.	• Tripping over tripods, gimbals, or other camera equipment • Injury from sharp edges • Tipping of camera stands or gimbals causing damage or injury	• Equipment properly set up and secured to prevent tipping • Tripods / equipment placed in clearly marked areas • Regular safety checks • Students trained on safe setup and pack up procedures	MEDIUM
Working with lighting equipment	• Electrical hazards • Burns from hot lights • Falling lights or stands • Exposure to intense lighting.	• Electrical shock from improperly set up or maintained lighting equipment • Burns from hot lights • Injury from falling lighting stands • Eye strain or damage from direct exposure to bright lights	• Use of LEDs with lower heat emission to reduce burn risk • In-built fans in lights to assist in cooling • Equipment regularly inspected • Proper training on how to safely adjust and handle lights • Light stands or mounts are secured to avoid toppling. • Students instructed to avoid looking directly at bright lights	MEDIUM
Working with green screens	• Tripping, • Equipment falling	• Tripping over (portable) green screen material or supports. • Injury from poorly secured green screen.	• Use of lightweight, portable green screens that are easy to set up and move • Clear instructions and supervision for setting up and dismantling the green screen • Students trained on proper handling	LOW
Handling cables and power supplies	• Electrical hazards • Tripping over cables • Overheating of power supplies.	• Electrical shock from damaged cables. • Tripping over tangled or loose cables. • Overheating or malfunction of power supplies or outlets.	• Cables securely fastened and organised properly • Use of cable covers to prevent students from accidentally stepping on or pulling cables • Electrical equipment regularly inspected • Use of surge protectors and circuit breakers • Training on how to safely plug /unplug cables /equipment	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Zen Den (L3.G30)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Sensory lighting in Zen Den	• Overheating of lighting • Electrical malfunction • Dim sensory lighting • Tripping on cables	• Burns from touching hot lights • Electrical shock • Tripping over wires	• Use of low voltage, LED lighting that is cool to the touch. • Proper installation of lights, ensuring wiring is insulated and secure. • Electrical equipment is regularly inspected and maintained. • Cables are tucked away, or cord covers are used to avoid tripping.	LOW
Use of sensory items in Zen Den (Lego, fidgets, kinetic sand, playdough etc.)	• Small parts causing choking hazards • Tripping on scattered pieces	• Choking • Injury from stepping on hard pieces • Injury from sharp edges.	• Small pieces are stored in secure, labelled containers. • Spaces provided to use kinetic sand, playdough, Lego etc. • Clear space around Lego area to avoid tripping hazards. • Supervision when students use the Lego corner.	MEDIUM
Seating in Zen Den (comfy couch, egg chair, bean bag)	• Falling or tipping over • Improper use • Poor seating posture can lead to discomfort or injury	• Falling or toppling over • Injury from sudden movements or imbalance • Poor posture or muscle strain	• Bean bags and chairs are sturdy, filled with appropriate materials (e.g., microbeads). • Ensuring furniture is appropriately sized for the students and spaced to avoid overcrowding. • Regular checks for any rips or damage to bean bags or chairs. • Instructions provided for safe use (e.g., not jumping in the chairs). • Area is spacious enough to avoid overcrowding.	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Biology Programs in Genetics Laboratory (L3.B14)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using a micropipette	• Chemical exposure • Biological contamination • Sharp tips • Mechanical injury	**Students** handling the micropipettes. • **Chemicals** can cause skin irritation or other health issues if not handled properly. • When using **biological** materials there's a chance of exposure to pathogens. • **Pipette tips** are sharp and may cause cuts. • **Micropipettes** have moving parts that might cause injury if not used correctly.	• Safety instructions for using a micropipette • Wear PPE – lab coat, goggles and gloves • Follow instructions for using micropipette – use micropipettes gently and do not overload the pipette. • If you spill any chemicals inform the teacher and clean up as instructed. • Do not eat or drink in the laboratory	MEDIUM
Preparing gels for electrophoresis	• Chemical exposure • Sharp tips • Mechanical injury • Glassware	**Teacher** setting up the experiment. • **Chemical** (Midori Green Xtra AND TBE buffer) used for staining the gel may be irritating to the eyes, respiratory system /skin • **Pipette tips** are sharp, may cause cuts. • **Micropipettes** have moving parts that might cause injury if not used correctly. • **Hot glassware** from preparing agarose in microwave (**electric hazard**)	• Wear PPE – lab coat, goggles and gloves • Handle with care. • Allow glassware to cool down before handling it (preparing agarose) and use appropriate tools to handle hot objects. • Ensure all electrical connections are secure.	MEDIUM
Gel electrophoresis	• Chemical exposure • Electrical hazard • Thermal hazard	**Students** setting up and running gel electrophoresis. • **Chemical** (Midori Green Xtra AND TBE buffer) used for staining the gel may be irritating to the eyes, respiratory system and skin. • Using **Electricity** has a risk of electric shock if the equipment is not used correctly or there is a fault. • Equipment can get **hot** during or after the experiment.	• Wear PPE – lab coat, goggles and gloves • Handle with care • Follow instructions for using equipment correctly and safely • Ensure all electrical connections are secure. • Regularly have equipment tag and tested • Safely dispose of DNA material using designated hazardous waste containers	MEDIUM
Handling DNA samples and reagents	• Contamination	• Accidental exposure to harmful DNA or chemicals • Accidental contamination of reagents	• Wear PPE – lab coat, goggles, gloves, hair tied back • Use sterile techniques to avoid contamination • Use a fresh pipette tip for every sample	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

	• Exposure to hazardous materials		• Proper disposal of waste (DNA, pipette tips, etc.) into allocated 'tip waste bins'	
Using Bunsen Burners **(Glowing Bacteria)**	• Fire hazard	• Burns, fire, ignition of flammable materials	• Keep flammable materials away from the flame. • Ensure students and staff are trained in safe use of the Bunsen burner • Use the correct flame (blue flame) • Never leave a Bunsen Burner unattended • Always turn off the Bunsen Burner after use	MEDIUM
Heat shock in bacterial transformation **(Glowing Bacteria)**	• Thermal burns	• Burns to skin or injury	• Ensure water bath is set to 42°c • Use heat-resistant gloves to handle heated glassware • Label heat-shock procedure clearly	MEDIUM
Handling bacterial cultures and pGLO plasmid **(Glowing Bacteria)**	• Exposure to modified organisms (GMOs)	• Accidental exposure to genetically modified organisms containing pGLO	• Conduct procedures under a Bunsen burner 'sterile workspace' • Label all GMO materials and waste clearly • Proper disposal of bacterial waste • Ensure safe handling and destruction of GMOs as per BHI safety protocols.	MEDIUM
Using stools	• Trips or falls	• Students may hurt themselves if they trip over stools	• Stools pushed under benches while not in use • Stools are not to be stood or swung on • Area to be kept clear of belongings	LOW
Using a microcentrifuge	• Physical injury • Chemical burns	• The rotor spins fast, so opening the lid during operation can cause injury. • Spills can happen is samples aren't balanced or sealed properly.	• Not using hazardous chemicals in microcentrifuge • Students should wear PPE – safety glasses, lab coat, closed-toed shoes, nitrile gloves, long hair tied back • Ensure all electrical connections are secure • Regularly have equipment tag and tested	LOW
Using a vortex	• Moving parts • Pinching • Spilling or splashing • Electrical	• Injury from moving or rotating parts • Chemical exposure or contamination • Risk of electrocution • Risk of fire and explosion	• Always use the vortex as per instructions • Ensure all tubes or vials are properly sealed/ secured before use • Any broken or damaged electrical equipment should be labelled and removed for repair • Regularly have equipment tag and tested	MEDIUM
Using glassware	• Broken glass	• Broken glass can cause cuts, damage to eyes and skin	• Students should wear PPE – safety glasses, lab coat, closed-toed shoes, nitrile gloves, long hair tied back.	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

			• Do not pick up glass with bare hands • Alert someone as soon as glass is broken to be disposed of in the broken glass container	
Using a water bath	• Hot water burn risk • Contamination • Evaporation	• Burns from hot water can cause significant skin damage. • Sample becomes contaminated, it can affect the results of the experiment. • If a water bath is not properly sealed, the loss of water through evaporation could affect the stability of the system.	• Temperature set to maximum 42°C to reduce burn risk • Students should wear PPE – safety glasses, lab coat, closed-toed shoes, nitrile gloves, long hair tied back. • Lid should be kept on whenever possible to avoid risk of contamination and evaporation • Water bath should be switched off at the end of each lab session	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Chemistry Programs in Genetics Laboratory (L3.B14)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using a micropipette	• Chemical exposure • Biological contamination • Sharp tips • Mechanical injury	**Students** handling the micropipettes. • **Chemicals** can cause skin irritation or other health issues if not handled properly. • **Pipette tips** are sharp and may cause cuts. • **Micropipettes** have moving parts that might cause injury if not used correctly.	• Safety instructions for using a micropipette • Wear PPE – lab coat, goggles and gloves (to prevent exposure) • Handle with care. • Follow instructions for using micropipette – use micropipettes gently and do not overload the pipette. • If you spill any chemicals inform the teacher and clean up as instructed. • Do not eat in the laboratory	MEDIUM
Thin Layer Chromatography (TLC)	Use of hazardous and/or flammable chemicals: • TLC solvent (Hexane Acetone mixture) • Methanol • Hexane • Acetone • Ethanol • Isopropanol	• Facilitators, students or teachers may be harmed if solvent is spilled or inhaled • Health risk if acetone/ TLC solvent comes in contact with skin or is inhaled	• Inform students of risk • Facilitator should handle TLC solvent (Hexane Acetone mixture) and methanol/isopropanol for HPLC solvent reservoir • Gloves, safety glasses and lab coats must be worn when using hazardous chemicals • Hexane and acetone must be handled in fume cupboard with exhaust turned on and lid should be kept on reagent bottles wherever possible to avoid fumes • Students should receive safety briefing about use of hazardous chemicals • Instruct students to keep lid on acetone bottles at all times and to inform teacher if any chemical is spilled • Keep flammable chemicals (methanol, hexane, acetone, ethanol, isopropanol) away from ignition sources • Solid flammable waste (i.e. leftover plant matter) should be disposed of in solid flammable waste container	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

			• Chemical waste should be disposed of in appropriate container (hazardous and/or flammable chemical waste)	
Thin Layer Chromatography (TLC)	Use of sharp capillary tubes	• Lab users may get injured by sharp capillary tubes • Puncture risk to eyes and skin	• Inform students of risk • Gloves, safety glasses and lab coats must be worn • Instruct students to handle capillary tubes with care and dispose in sharps container in fume cupboard • Sharps container should be placed in fume cupboard for used capillary tubes	MEDIUM
Setting up the HPLC machine	• Electrical hazard • Exposure to hazardous chemicals • Pressurised systems	• HPLC system uses **electrical** components and is connected to a power supply, increasing the risk of electrical shock during setup or troubleshooting • An **electrical** shock can cause serious injury or death • Solvents used in HPLC (e.g. methanol) can be **hazardous** if improperly handled or spilled • Solvents can be toxic, flammable, or cause skin irritation. • HPLC system is **pressurised**, and there is a risk of leaks or ruptures in tubing or connections, especially during setup or calibration.	• Ensure the system is powered off when making adjustments or connections. • Follow proper electrical safety protocols. • Use appropriate PPE (gloves, goggles, lab coats) and work in a well-ventilated area or fume hood. • Properly store and dispose of solvents. • Always inspect and secure tubing and connections before starting the system. Work with caution to avoid sudden pressure releases.	MEDIUM
Using the HPLC machine	• Chemical exposure • Pressure hazards • Contamination • Spills or leaks • Thermal burns	• Solvent vapours or accidental spills can lead to **chemical** exposure. • The system operates under **high pressure** (up to 6000 psi or more) - risk of pressure-induced accidents such as bursting tubing or seals. • Possible **contamination** during sample injection if proper technique is not followed.	• **<u>Machine to be operated by a HPLC trained scientist</u>** • Use appropriate PPE (gloves, goggles, lab coat), and ensure you are working in a well-ventilated area • Always check for leaks, and ensure equipment is rated for the pressure it will be subjected to • Follow manufacturer's guidelines for safety • Use clean injection techniques, sterile equipment, and regularly maintain the injection port to minimize contamination risk	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

		• **Spills** can happen during the solvent preparation, sample injection, or while collecting waste. • HPLC columns are often **heated** for optimal performance.	• Use solvent containers designed to minimise spillage, and ensure containers are properly sealed • Allow the system to cool before handling. • Wear heat-resistant gloves or use tongs when touching hot components	
Using stools	• Trips or falls	• Students may hurt themselves if they trip over stools	• Stools to be pushed under benches while not in use • Stools are not to be stood or swung on. • Area to be kept clear of belongings • Signage to clearly indicate areas with trip hazards	LOW
Using a microcentrifuge	• Physical injury • Chemical burns	• The rotor spins fast, so opening the lid during operation can cause injury • Spills can happen is samples aren't balanced or sealed properly	• Not using hazardous chemicals in microcentrifuge • Students should wear PPE – safety glasses, lab coat, closed-toed shoes, nitrile gloves, long hair tied back • Ensure all electrical connections are secure • Regularly have equipment tag and tested	LOW
Using a vortex	• Electrical • Mechanical	• Risk of electrocution • Risk of fire and explosion • Risk of damaging finger/hand	• Any broken or damaged electrical equipment should be labelled and removed for repair • Ensure all electrical connections are secure. • Regularly have equipment tag and tested • Instruct students to avoid using or transferring liquid close to power outlet • Do not place fingers or objects in an operating vortex	LOW
Using glassware	• Broken glass	• Broken glass can cause cuts, damage to eyes and skin	• Students should wear PPE – safety glasses, lab coat, closed-toed shoes, nitrile gloves, long hair tied back • Students should not take these off unless they leave the lab • Do not pick up glass with bare hands. • Alert someone as soon as glass is broken to be disposed of in the broken glass container	LOW
Using a water bath	• Hot water burn risk • Contamination • Evaporation	• Burns from hot water can cause significant skin damage. • Sample becomes contaminated, it can affect the results of the experiment. • If a water bath is not properly sealed, the loss of water through evaporation could affect the stability of the system.	• Temperature set to maximum 80 °C to reduce burn risk • Students should wear PPE – safety glasses, lab coat, closed-toed shoes, nitrile gloves, long hair tied back. • Lid should be kept on whenever possible to avoid risk of contamination and evaporation. • Water bath should be switched off at the end of each lab session.	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Sim Room Programs (L3.G24)
Date endorsed:	28.03.3035	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using LED Wall for program projection	• Eye strain or glare	• Visual discomfort • Eye strain	• Adjustable brightness of the LED wall • Blinds available in the room to block out sunlight • Avoid prolonged exposure to direct light from the wall	LOW
Small stage at front of room	• Trip and fall hazards	• Injuries from tripping or falling	• Marking the step with visible tape • Ensuring proper lighting on and around the step	LOW
Using iPads on Metal Stands	• Equipment instability or damage	• iPads being dropped • Equipment damage	• Ensure metal stands are stable and secure at an appropriate height • Training on proper handling of iPads • Regular checks of iPads and stands for damage	LOW
Playing the Farm Sim Game	• Overuse injuries from repetitive motion	• Strain • Muscle soreness	• Students are to work collaboratively in teams taking turns • Adjustability of iPad height for comfort • Proper posture and ergonomic setup for iPad use	MEDIUM
Movement in Sim Room	• Slips, trips, and falls	• Clutter	• Clear walkways and non-slip flooring in the room • Regular equipment checks	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Clean Energy Programs (L3.G26/G27)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using the wind turbines (Horizon / STELR)	• Electrical • Mechanical • Falls or trips	• Blades not inserted firmly into hubs; they may fly out at a high speed while the turbine is spinning • Blades of wind turbines spin at high speeds, which can pose a risk of injury if someone comes into contact with them.	• Ensure proper fit and alignment of the blades in the hub, and check for balance to reduce vibrations. • Ensure that all connections are correctly wired. • Follow manufacturer instructions. • Use insulated tools when handling electrical components. • Ensure the setup area is clear of obstacles and students are aware of safety precautions.	LOW
Using a wind tunnel	• Airborne particles or debris • Mechanical injury • Noise exposure	• Airborne particles can cause respiratory issues, especially if students have allergies or sensitivities. • Wind tunnel has mechanical parts, which can cause injury if not properly shielded. • Can generate high levels of noise, which might be uncomfortable or harmful to hearing over time.	• Provide PPE like ear protection and masks. • Use protective barriers around moving parts. • Supervise student use and ensure safe operating procedures are followed. • Ensure the wind tunnel is properly secured with protective shields or covers to prevent contact with moving parts. • Limit exposure time and provide hearing protection as needed.	LOW
Using the STELR house kits	• Electrical • Thermal burns • Equipment damage	• Mishandling of electrical components, incorrect assembly of circuits, or faulty equipment can lead to electric shock. • Overloading electrical circuits or damaged wires can lead to overheating, creating a potential fire hazard. • Improper handling or incorrect component use can result in damage to the kit's components • Direct contact with the hot heating component can lead to burns.	• Students will be instructed on how to safely setup the STELR houses. • Before students use, facilitators should conduct a thorough inspection to confirm that there are no damaged wires or faulty components. • Students to remove any metallic jewellery (e.g., rings, bracelets) before using the kits. • Ensure that students understand the importance of keeping the heating component at least 10 cm away from the 'house' • Ensure facilitator is present to provide guidance and immediate intervention if necessary	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

		• Risk of injury is higher for students wearing metallic jewellery.		
Using interactive TV screens	• Electrical • Eye strain and fatigue	• Faulty wiring or equipment failure could present a risk of electrical shock. • Electrical shock could lead to injury. • Prolonged use of interactive screens can lead to eye strain, headaches, and general fatigue.	• Use screens in a well-lit environment and limit the duration of use. • Ensure equipment is safely installed and regularly checked for faults.	LOW
Using exercise bikes	• Physical injury • Mechanical injury • Fall risk	• Students may push themselves too hard during exercise, leading to muscle strain, fatigue, or more severe injuries like sprains. • Exercise bike has moving parts (pedals, chain) that can cause injury if students get caught in them. • Risk of falling off the bike if it is not set up properly or if the student loses balance.	• Encourage students to warm up properly. • Regularly inspect bikes for safety and ensure that all moving parts are properly shielded or secure. • Provide proper instructions on how to safely use the exercise bikes. • Encourage students to take regular breaks and stop if they feel fatigued. • Ensure the equipment is well-maintained and free of mechanical faults.	MEDIUM
Using the 3D printers	• General 3D printing safety • Burns from touching hot surfaces (nozzle, bed, extruder) • Pinching or crushing injuries	• Unsafe operation • Injury • Fire hazard	• Safety briefing before use with warning signs in area • Fire extinguisher and first-aid kit available • Constant supervision for students / inexperienced users • Allow cooling time before handling – nozzle, bed, extruder • Keep hands away during operation	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Water / Soil Testing in Genetics Laboratory (L3.B14)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Traveling to and from test locations (lake, greenhouse, etc.)	• Pedestrian accidents • Weather hazards	• Slippery or uneven ground • Extreme weather	• Supervision at all times • Use of safe routes, • Availability of first aid kits • Proper footwear • Weather checks before outdoor activities • Availability of sun protection – hat, suncream • Availability of water and shade	MEDIUM
Collecting water or soil samples from the lake or other environments	• Water-related hazards • Exposure to microorganisms	• Drowning • Slip/fall hazards near lakes or ponds	• Safety briefing before collecting samples • Non-slip footwear • Appropriate PPE – gloves, safety glasses • Supervision at all times	MEDIUM
Using the Backpack Soil /Water Testing Kits to analyse the samples	• Chemical spills • Equipment malfunction	• Spills or splashes of chemicals from reagents used in testing	• Appropriate PPE – gloves, safety glasses • Regular equipment checks • Safety briefing in proper handling of reagents	MEDIUM
Handling and disposing of chemical reagents that may be used in the testing process	• Chemical exposure • Incorrect disposal of chemicals	• Chemical exposure to skin or eye contact • Inhalation of fumes from reagents • Incorrect disposal of chemicals leading to environmental contamination or health hazards	• Appropriate PPE – gloves, safety glasses • Safety briefing in proper handling of reagents • Awareness of safe disposal methods	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Agriculture Fieldwork – greenhouse / field visits
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Working with plants in greenhouse	• Allergies and Plant-related injuries	• Skin irritation • Respiratory issues	• PPE provided – gloves, masks • Hand sanitiser provided – when entering/leaving the space • Hand washing essential after leaving the greenhouse • First-aid kit in greenhouse	MEDIUM
Working with plants in greenhouse	• Overuse injuries	• Overuse injuries from using tools	• Consider safe watering protocols • Safety briefing on using digging tools	LOW
Working with plants in greenhouse	• Slipping on ground	• Risks of slips, trips and falls	• Clear walkways around the greenhouse • Non-slip footwear • Avoid walking on slippery terrain • Watering after hours when students are not using the space	LOW
Working with plants in greenhouse	• Heat stress	• Heat exhaustion	• Proper ventilation in space • Opening all windows and doors when working in the greenhouse	MEDIUM
Visting agricultural field sites	• Chemical exposure	• Accidental poisoning	• Pesticides are not used around students, however, may have been used on site in previous days • First-aid kit on hand	MEDIUM
Visting agricultural field sites	• Extreme weather	• Heat exhaustion • Hypothermia	• Hot weather protection – hat, suncream, long clothes, drinking water • Inclement weather protection - waterproof clothing, access to shelter • Postpone activities if necessary	MEDIUM
Visting agricultural field sites	• Field sampling	• Skin irritation • Respiratory issues	• Safety briefing on how to correctly collect a dirt sample • PPE provided - gloves	
Visting agricultural field sites	• Uneven ground	• Risks of slips, trips and falls	• Clear walkways around the field site • Non-slip footwear • Avoid walking on slippery or uneven terrain	MEDIUM
Visting agricultural field sites	• Heavy equipment	• Heavy machinery on site	• Students not to touch heavy equipment while in the field • Heavy machinery will not be used during field visits	LOW

Risk Assessment – Programs at Yarra Ranges Tech School

Responsible Staff Member:	Sally Stepniewski	**Location:**	Sports Science in Gym / Outside (L3.B19)
Date endorsed:	28.03.2025	**Endorsed by:**	Travis Burroughs

ACTIVITY	HAZARD	POTENTIAL RISKS	EXISTING CONTROLS	RISK RATING
Using gym equipment	• Strains, sprains, slips and trips	• Injuries	• Students are to wear appropriate enclosed footwear • Ensure space has clear walkways and is free of obstacles • Non-slip flooring in high-traffic areas • First aid kit available if required	LOW
Using Rox Pro (in gym)	• Incorrect use	• Trips or falls • Strains • Collisions with equipment	• Provide briefing and instructions on how to use the system safely • Proper warm-up and stretching before using the system • Ensure adequate space around Rox Pro units that is clear of obstacles • Ensure students are supervised at all times	LOW
Using force plates (in gym)	• Incorrect use	• Injury from improper landing or balance loss	• Provide briefing and instructions on how to use the system safely • Proper warm-up and stretching before using the system • Students are reminded about proper landing techniques • Force plates are securely positioned and checked before use	LOW
Using Vertec Vertical Jump Tester (in gym)	• Misjudging jump height • Injury during jump • Collisions	• Strains, sprains or falls • Collision with Vertec equipment or surroundings • Incorrect technique resulting in injuries	• Provide briefing and instructions on how to use the system safely • Proper warm-up and stretching before using the system • Ensure adequate space around 'Vertec' that is clear of obstacles • Ensure students are supervised at all times • Encourage proper rest and recovery periods between tests	MEDIUM
Using Gym Aware RS	• Incorrect barbell height adjustment • Lifting too heavy • Incorrect technique	• Strains or back/ shoulder/ wrist injuries • Equipment failure	• Provide briefing and instructions on how to use the system safely • Proper warm-up and stretching before using the system • Ensure adequate space that is clear of obstacles • Ensure proper lifting technique • Use of spotters at all times • Safety clips on both sides of the barbell • Ensure students are supervised at all times	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Using timing gates (outside)	• Collisions • Slips or trips • Inclement weather	• Trips or falls on turf • Collisions with equipment or people • Heat exhaustion • Hypothermia	• Provide briefing and instructions on how to use the system safely • Proper warm-up and stretching before using the system • Ensure appropriate footwear for running • Turf is inspected regularly for any areas that could cause trips or skips • Timing gates placed safe distance from each other to avoid accidental collisions • Weather checks before outdoor activities • Availability of sun protection – hat, suncream, long clothes • Availability of water and shade • Relocate activity to inside if extreme weather	MEDIUM

Risk Assessment – Programs at Yarra Ranges Tech School

Risk Assessment Matrix Used to combine consequence with likelihood to determine the overall level of risk.			Consequences				
			Minor Injuries or discomfort. No medical treatment or measurable physical effects	Injuries or illness requiring medical treatment. Temporary impairment	Injuries or illness requiring hospital admission	Injury or illness resulting in permanent impairment	Fatality
			Insignificant	**Minor**	**Moderate**	**Major**	**Severe**
Likelihood	Expected to occur regularly under normal circumstances	**Almost certain**	Medium	High	Extreme	Extreme	Extreme
	Expected to occur at some time	**Likely**	Medium	High	High	Extreme	Extreme
	May occur in normal circumstances	**Possible**	Low	Medium	High	High	Extreme
	Not likely to occur in normal circumstances	**Unlikely**	Low	Low	Medium	Medium	High
	Could happen, but probably never will.	**Rare**	Low	Low	Low	Low	Medium