

**FEIT HEALTH & SAFETY GENERAL RISK ASSESSMENT**

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| **Activity name** | P29 G21 DMMS S2024 | **Faculty** |  | **School / Centre / Department** |  |
| **Activity description** |  | | | | |
| **Date of assessment** | 9/9/2024 | **Version No.** |  | **Next review date** |  |
| **Assessor’s name** |  | **Assessor’s description** | Staff / Student / Other | **Assessor’s supervisor** |  |
| **Location(s) of activity** | Tech Lab, Mechanical Design Lab. Mechatronics Lab, Protospace, home | **Lab Manager (or equivalent) of activity location (if relevant):** |  | **Planned activity date(s):** |  |
| **Persons at risk** | Workers / Students / Visitors / Contractors / Public / Other | **Persons consulted**  (consider anyone with access to or affected by the activity) |  | | |
| **Reference legislation, standards, codes of practice, manufacturer’s guidance etc used to help identify hazards and control measures relevant to this activity**  *Refer to the* [*H&S Policy*](http://www.gsu.uts.edu.au/policies/health-safety-policy.html)*,* [*Codes of Practice*](https://www.safeworkaustralia.gov.au/resources_publications/model-codes-of-practice)*,* [*Australian Standards*](https://sso.lib.uts.edu.au/cas/login?service=https%3A%2F%2Fwww.lib.uts.edu.au%2Fgoto%3Fqurl%3Dhttps%253a%252f%252fwww.saiglobal.com%252fonline%252fautologin.asp%26_casCheck%3Dtrue) | | |  | | |

*Instructions:**Use the guidance notes at the end of this document to help complete this table*

| **TASK**  List and describe hazardous task/activity/process/step/equipment | **ASSOCIATED HAZARD(S)** | **INHERENT HARM**  Harm that could occur from these hazards if controls fail or are not in place. | **EXISTING CONTROL MEASURES**  Control measures currently in place to minimise risk | **RISK LEVEL** (H,M,L) | **PROPOSED CONTROL MEASURES**  Additional control measures needed to reduce risk further | **TARGET DATE**  To implement proposed controls | **RESIDUAL RISK LEVEL** (H,M,L) |
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| 3D Printing (home/Protospace): | - Hot surface - Fumes - Moving parts - Sharp objects | - Burns - Inhalation of harmful fumes - Mechanical injuries | * PPE. Gloves, safety googles, face shield * Training for operators. * Regular maintenance | M | - | ASAP | M |
| In a mechanical lab: | * Sharp objects * Flying debris * Chemical exposure * Slips, trips, falls * Manual handling * Compressed air | * Burns * Eye injuries * Hearing damage | * Machine guards and safety interlocks * PPE. Gloves, safety glasses, hearing protection, welding masks, safety boots * Regular maintenance | H | * Safety training * Enhanced ventilation * Periodic safety drills and inspections | ASAP | M |
| In mechatronics lab: | * Electrical hazards * Mechanical hazards. * High temperatures * Fire risk * Chemical exposure | * Electric shock or burns * Eye injuries * Cuts * Inhalation of fumes * Hearing Damage | * PPE. Gloves, safety glasses, hearing protection, welding masks, safety boots * Proper ventilation * Machine guards * Electrical safety protocols | H | * Safety training * Clear labelling of all equipment | ASAP | M |
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| **Emergency preparation and response** | | | | | |
| **EMERGENCY**  List and describe foreseeable potential emergency situations | **INHERENT HARM**  Harm that could occur from these hazards if controls fail or are not in place. | **EXISTING CONTROL MEASURES**  Control measures currently in place to minimise risk | **PROPOSED CONTROL MEASURES**  Additional control measures needed to reduce risk further | **TARGET DATE**  To implement proposed controls | **RESIDUAL RISK LEVEL** (H,M,L) |
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| **Sign-off and Approval** | | | | | | |
| Assessor’s Name: |  | Reasonably practicable control measures identified and implemented | Signature |  | Date |  |
| Lab Manager Name:  (if relevant) |  | Have been consulted on the suitability of the space for the activity | Signature |  | Date |  |
| Responsible supervisor’s\* Name: |  | Satisfied that control measures will reduce risk to an acceptable level | Signature |  | Date |  |

\*Responsible supervisor is the person with control/authority over the activity.

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| **Acknowledgement of Understanding**  Persons performing the activity/tasks sign that they have read and understood the risk assessment.  **Note:** For activities which are low risk or include a large group of people (e.g. open days, BBQ’s, student classes etc), only the persons undertaking the key activities should sign below. For all others involved, the information can be covered by other methods (for example a safety briefing, induction, and/or safety information sheet). | | | | |
| **Student / Staff name** | **ID** | **Date** | **Signature** | **Remarks** |
| Kelvin Kong | 14178471 | 9/9/2024 |  |  |
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**Guidance notes for completing the risk assessment**

**TASK**

**Briefly describe hazardous tasks involved in this work activity –** For example, 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**

**Manual Handling** – moving objects, repetitive movements, lifting awkwardly, lifting heavy objects

**Work Environment** – extremes in temperature, work at height, explosive atmosphere, slippery surfaces/trip hazards, work load, work alone, work after hours, confined spaces, infrastructure

**People** – potentially violent or volatile clients/interviewees, harassment, bullying, victimisation, poor culture

**Environmental** – emissions to atmosphere, discharge to soil and water bodies (including stormwater run-off), nuisance noise & odour, poor ventilation/air quality

**Plant & Equipment** – noise, vibration, dust, moving parts (crushing, friction, stab, cut, shear), pressure vessels, lifts/hoists/cranes, sharps, maintenance, design/assembly, AEV/Drone, hot work

**Electrical** – plug-in equipment used in ‘hostile’ work environment, exposed conductors, high voltage equipment

**Chemical** – hazardous substances, dangerous goods, fumes, dust, compressed gas, hazardous waste

**Biological** – exposure to bodily fluids/infectious materials, pathogenic microorganisms (bacteria, viruses, parasites, fungi), security sensitive biological agents, sharps/needles, animal bites and scratches, allergies to animal bedding, dander and fluids

**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

**Radiation (non-ionizing)** – including lasers, microwaves or UV light

**INHERENT HARM**

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.

**EXISTING CONTROL MEASURES**

This is existing measures in place 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 to the top of the list are preferable.

1. Eliminate the hazard. For example, work from the ground with a long-handled tool instead of a ladder thus eliminating work at height.
2. SUBSITUTE THE HAZARD. For example, use a less dangerous piece of equipment or chemical.
3. ISOLATE THE HAZARD FROM PEOPLE. For example, move a noisy equipment into a room that is not accessed when it is in operation.
4. USE ENGINEERING CONTROLS. For example, use a fume cupboard for chemicals, use a guard for rotating parts.
5. USE ADMINISTRATIVE CONTROLS. For example, change work practices, provide training, use signage, develop a safe work method statement.
6. USE PERSONAL PROTECTIVE EQUIPMENT (PPE). For example, respirator, hearing protection, gloves. Training and information is required for the use of PPE.

**PROPOSED CONTROL MEASURES**

List control measures not currently in place but you plan to put in place before the activity starts.

**RISK LEVEL (High / Medium / Low)**

The level of risk can be determined by combining consequence and likelihood using the risk matrix below. Residual risk is the level with all control measures in place (existing and proposed). It 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.

*For more information on risk determination refer to the* [*UTS Risk Management Procedure*](https://staff.uts.edu.au/topichub/Documents/Risk/Risk%20Management%20Procedures.pdf)

