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| **Risk Assessment** | | | | |
| **Risk Assessment for the activity of** | **Computational and experimental work on Individual Project** | | **Date** | **23/10/2023** |
| **Unit/Faculty/Directorate** | **Engineering** | **Assessor** | **Natalie Ko-Ferrigno** | |
| **Line Manager/Supervisor** | ***John Lawson*** | **Signed off** |  | |

| ***PART A*** | | | | | | | | | | |
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| **(1) Risk identification** | | | **(2) Risk assessment** | | | | **(3) Risk management** | | | |
| **Hazard** | **Potential Consequences** | **Who might be harmed**  **(user; those nearby; those in the vicinity; members of the public)** | **Inherent** | | |  | **Residual** | | | **Further controls (use the risk hierarchy)** |
| **Likelihood** | **Impact** | **Score** | **Control measures (use the risk hierarchy)** | **Likelihood** | **Impact** | **Score** |
| Cables presenting trip hazard | Falling resulting injury, head injury from large items in the lab | Anyone in the lab | **3** | **2** | **6** | **Ensure cables are at waist height or covered. Ensure they have high-visibility markings.** | **2** | **1** | **2** | Minimise use of trailing cables where possible |
| Display Screen Equipment Usage | Eye strain, repetitive strain injuries, back/shoulder/headache | Computer user | **4** | **3** | **12** | **Complete DSE training**  **Set up equipment properly**  **Take regular breaks** | **1** | **2** | **2** |  |
| Slips, trips and falls from water on floor | Wrist injuries, bruising | Anyone on the lab | **3** | **2** | **6** | **Ensure any spillages are cleaned up promptly** | **1** | **2** | **2** |  |
| Electronics near water | Shock  Fire | Anyone in the lab | **2** | **3** | **6** | **Use a physical barrier between electronics and water**  **Signage to indicate the hazard**  **Ensure fire extinguishers are present and functional** | **1** | **3** | **3** |  |
| Nylon powder | Eye and skin irritation | Anyone in the lab | **3** | **2** | **6** | **Only move the powder in a well-ventilated area.**  **Ensure access to MSDS** | **2** | **1** | **2** |  |
| Assembly and disassembly of equipment | Cuts and bruises  Electric shock | User, those nearby | **4** | **2** | **8** | **Ensure a clean working area**  **Ensure electronic components do not have power when working on them** | **2** | **2** | **4** |  |

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| ***PART B – Action Plan*** | | | | | | | |
| **Risk Assessment Action Plan** | | | | | | | |
| **Part no.** | **Action to be taken, incl. Cost** | **By whom** | **Target date** | | **Review date** | **Outcome at review date** | |
|  | Move large items out of walkways | Technician | 29 Jan 2024 | |  |  | |
|  | Undergo training for setting up DSE on Blackboard | Natalie Ko-Ferrigno | 22 Oct 2023 | | 29 Oct 2023 | Completed and understood, 100% on the short test | |
|  | Ensure a mop is nearby and known so the spill can be cleaned | Natalie Ko-Ferrigno | 29 Jan 2024 | |  |  | |
|  | Manufacture enclosures/shields for electronics | Natalie Ko-Ferrigno | 05 Feb 2024 | |  |  | |
| Responsible manager’s signature: | | | | | Responsible manager’s signature: | | |
| Print name: | | | | Date: | Print name: | | Date |

**Assessment Guidance**

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| 1. Eliminate | Remove the hazard wherever possible which negates the need for further controls | If this is not possible then explain why |  |
| 1. Substitute | Replace the hazard with one less hazardous | If not possible then explain why |
| 1. Physical controls | Examples: enclosure, fume cupboard, glove box | Likely to still require admin controls as well |
| 1. Admin controls | Examples: training, supervision, signage |  |
| 1. Personal protection | Examples: respirators, safety specs, gloves | Last resort as it only protects the individual |

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| **LIKELIHOOD** | 5 | 5 | 10 | 15 | 20 | 25 |
| 4 | 4 | 8 | 12 | 16 | 20 |
| 3 | 3 | 6 | 9 | 12 | 15 |
| 2 | 2 | 4 | 6 | 8 | 10 |
| 1 | 1 | 2 | 3 | 4 | 5 |
|  | | 1 | 2 | 3 | 4 | 5 |
| **IMPACT** | | | | |

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| Impact | | Health & Safety |
| 1 | Trivial - insignificant | Very minor injuries e.g. slight bruising |
| 2 | Minor | Injuries or illness e.g. small cut or abrasion which require basic first aid treatment even in self-administered. |
| 3 | Moderate | Injuries or illness e.g. strain or sprain requiring first aid or medical support. |
| 4 | Major | Injuries or illness e.g. broken bone requiring medical support >24 hours and time off work >4 weeks. |
| 5 | Severe – extremely significant | Fatality or multiple serious injuries or illness requiring hospital admission or significant time off work. |

Risk process

1. Identify the impact and likelihood using the tables above.
2. Identify the risk rating by multiplying the Impact by the likelihood using the coloured matrix.
3. If the risk is amber or red – identify control measures to reduce the risk to as low as is reasonably practicable.
4. If the residual risk is green, additional controls are not necessary.
5. If the residual risk is amber the activity can continue but you must identify and implement further controls to reduce the risk to as low as reasonably practicable.
6. If the residual risk is red do not continue with the activity until additional controls have been implemented and the risk is reduced.
7. Control measures should follow the risk hierarchy, where appropriate as per the pyramid above.
8. The cost of implementing control measures can be taken into account but should be proportional to the risk i.e. a control to reduce low risk may not need to be carried out if the cost is high but a control to manage high risk means that even at high cost the control would be necessary.

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| Likelihood | |
| 1 | Rare e.g. 1 in 100,000 chance or higher |
| 2 | Unlikely e.g. 1 in 10,000 chance or higher |
| 3 | Possible e.g. 1 in 1,000 chance or higher |
| 4 | Likely e.g. 1 in 100 chance or higher |
| 5 | Very Likely e.g. 1 in 10 chance or higher |