xRisk Assessment Template

Risk Matrix and Rating Guidance:

The assessor shall assign values for the hazard severity **(a)** and likelihood of occurrence **(b)** (taking into account the frequency and duration of exposure) on a scale of 1 to 5, then multiply them together to give the rating band:

|  |  |
| --- | --- |
| Hazard Severity (a) | Likelihood of Occurrence (b) |
|
| 1 – Trivial (e.g. discomfort, slight bruising, self-help recovery)**2 – Minor** (e.g. small cut, abrasion, basic first aid need)**3 – Moderate** (e.g. strain, sprain, incapacitation > 3 days)**4 – Serious** (e.g. fracture, hospitalisation >24 hrs, incapacitation >4 weeks)**5 – Fatal** (single or multiple) | **1 – Remote** (almost never)**2 – Unlikely** (occurs rarely)**3 – Possible** (could occur, but uncommon)**4 – Likely** (recurrent but not frequent)**5 – Very likely** (occurs frequently) |

|  |  |
| --- | --- |
|  |  |

|  |  |  |
| --- | --- | --- |
| **Risk Assessment Matrix** |  | **Risk Rating Bands (A x B)** |
| **(B)🡳 (A)🡲** | **Trivial** | **Minor** | **Moderate** | **Serious** | **Fatal** |  | **LOW RISK****(1 – 8)** | **MEDIUM RISK****(9 - 12)** | **HIGH RISK****(15 - 25)** |
| **Remote** | **1** | **2** | **3** | **4** | **5** |  |  |  |  |
| **Unlikely** | **2** | **4** | **6** | **8** | **10** |  | Continue, but review periodically to ensure controls remain effective | Continue, but implement additional reasonably practicable controls where possible and monitor regularly | **STOP THE ACTIVITY**Identify new controls. Activity must not proceed until risks are reduced to a low or medium level |
| **Possible** | **3** | **6** | **9** | **12** | **15** |  |
| **Likely** | **4** | **8** | **12** | **16** | **20** |  |
| **Very likely** | **5** | **10** | **15** | **20** | **25** |  |

|  |
| --- |
| Risk Assessment Record |
| Risk Assessment Title: 3d Printing Machine | Date Produced: March 2017 | Review Date: 24th January, 2022 |
| Overview/Description of Activity: 3d Printing | Duration/Frequency of Activity: Daily |
| Location of Activity: Student Workshops | Generic or Specific Assessment: Generic Risk Assessment |

| # | Hazard(s) identified | Who might be affectedand how | Existing controls & measures | Severity (a) | Likelihood (b) | Risk Rating (a x b) | Additional control/action required |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Use of 3d Printing Machine | Staff/Students | * Only trained personnel will have the authority to use the 3d printing machines.
 | 4 | 1 | 4 | * Training provided for Students, Trained Staff only to use 3d Printing Machines.
 |
| 2 | Entanglement in moving parts (drawing in) | Staff/Students | * Loose hair to be tied back, no loose clothing and jewellery to be worn. Ensure no loose clothing or PPE in proximity of this equipment when in operation.
 | 2 | 2 | 4 | * Correct PPE must be worn.
* Briefings given to students on correct PPE that must be worn.
* All Guards must be in place.
 |
| 3 | Molten Plastic can cause severe thermal burns.  | Staff/Students | * The correct PPE to be worn when operating and handling the 3d printer.
 | 3 | 3 | 9 | * Users will be reminded to wash their hands after touching the plastic.
 |
| 4 | Some individuals with respiratory imperilment may be effected by the processing fumes.  | Staff/Students | * Open windows and use local ventilation to control fumes.
* Use safety glasses fitted with side panels to limit contact with eyes.
 | 4 | 3 | 12 | * Move out of the environment if you feel unwell and seek medical advice.
 |
| 5 | Fire, staff could suffer fatal injuries from smoke inhalation/burns. | Staff/Students | * University carries out a fire risk assessment and identifies necessary action.
* Fire Alarms fitted in the room.
 | 5 | 2 | 10 | * Fire Extinguishers are provided near to the machinery in the event of a fire.
 |
| 6 | Excessive Heat above 350 Degrees C can cause dense toxic smoke. | Staff/Students | * The machines are pre-set so that they do not get near 350 Degrees C. In the event that they do users will be reminded that they need to evacuate the room immediately.
 | 2 | 5 | 10 | * The reels are housed in a dry safe location away from any source of heat.
 |
| 7 | Manual Handling may suffer musculoskeletal disorders from handling bulky objects | Staff/Students | * A manual handling assessment must be made if handling heavy parts.
* Training is provided on the safe manual handling of parts.
 | 3 | 2 | 6 | * Staff must attend manual handling courses, Students receive instruction on safe manual handling. Heavy duty gloves to be worn
 |
| 8 | Users could get electrical shocks or burns from using faulty electrical equipment or from faulty installations | Staff/Students | * Residual current devices are built into the power supply to the workshop.
* Staff check and report any defects.
 | 4 | 2 | 8 | * No personal equipment to be used in the workshop.
 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 9 | Users could get Chemical Burn from bath to dissolve support material | Staff/Students | * Gloves and Googles must be worn at all times when using the bath.
* In the event of contact eyes and skin must be flushed Immediately. If problem continues get medical assistance
 | 4 | 3 | 12 | * PPE must be worn at all times.
* Only fully trained staff to use the bath.
* Young people (under 18) not to use the bath under any circumstances.
 |

|  |  |  |
| --- | --- | --- |
| Assessor signature: | Print name: Gary Barter | **Date: 24th January, 2022** |

|  |
| --- |
| Risk Assessment Action Plan |
| Hazard No.  | Action to be taken | By whom | Target date | Review date | Outcome at review date |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| Responsible manager’s signature:Print name:Date: | Responsible manager’s signature:Print name:Date |

Risk Assessment Sign-On Sheet

**Sign on Sheet to acknowledge understanding of Risk Assessment:**

|  |
| --- |
| **Names and Signatures of other workers/researchers/PG/UG students***All others undertaking the process described must signify that they understand the hazards and risks.* |
| Print name: | Signature: | Date: |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |