**Workshop Machinery and Plant Competency Matrix, v0.3.1, 20 October 2015**

Note: This competency matrix is applicable only to UoA Staff and other workers associated with UoA machinery and plant use within a workshop (for the sake of brevity, this term is shortened to “Machinery”). Contractors independent of the University must be trained and deemed competent to use the machinery they are operating.

**Roles.**

A person’s role is an indication of their competency when interacting with machinery and plant. Roles within a workshop are: User, Operator, and Supervisor.

**User:** a person who has only been given basic awareness training in order to use specific machines or plant, and is not yet competent enough to be designated an operator. They may only use machinery and plant when a supervisor or designated responsible person/monitor is present.

**Operator:** a person who has demonstrated competence to a level where they can work with minimum or no supervision on the specific machinery and plant they have been trained to use. Operators are normally experienced staff, such as technicians.

**Supervisor:** A workshop supervisor is a designated person in charge of a workshop or plant room who is responsible for the activities taking place. Supervisors are people who are deemed competent to instruct others on how to use machinery and plant that they are authorised to use, and who can supervise users (such as staff or students) who have not yet achieved the levels of competency required to be an operator.

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| Core Training Element | Performance Criteria | User | Operator | Supervisor |
| 1. Demonstrate an understanding of legislation, standards & codes of practice relevant to machinery.  | 1.1 State how to access UoA machinery related information, relevant to an individual’s role. | x | x | x |
| 1.2 Describe the obligations and actions that apply to an individual’s specific role or level of training. | x | x | x |
| 2. Comply with Safe Work Instructions (SWI) | 2.1 Read a SWI. | x | x | x |
| 2.2 Follow a SWI. | x | x | x |
| 2.3 Download an existing SWI. |  | x | x |
| 2.4 Write a new SWI using the UoA template |  |  | x |
| 3. Use low power hand tools and small bench tools. | 3.1 Identify low power hand tools and small bench tools. | x | x | x |
| 3.2 Identify SWIs for low power hand tools and small bench tools. | x | x | x |
| 3.3 Operate low power hand tools and small bench tools. | x | x | x |
| 3.4 Instruct the safe use of low power hand tools and small bench tools. |  |  | x |
| 3.5 Supervise people using low power hand tools and small bench tools. |  |  | x |
| 4. Use medium power tools. | 4.1 Identify medium power tools. | x | x | x |
| 4.2 Identify SWIs for medium power tools. | x | x | x |
| 4.3 Operate medium power tools. | x | x | x |
| 4.4 Instruct the safe use of medium power tools. |  |  | x |
| 4.5 Supervise people medium power tools. |  |  | x |
| 5. Use high power hand tools and small bench tools. | 5.1 Identify high power hand tools and small bench tools. | x | x | x |
| 5.2 Identify SWIs for high power hand tools and small bench tools. | x | x | x |
| 5.3 Operate high power hand tools and small bench tools. | x\* | x | x |
| 5.4 Instruct the safe use of high power hand tools and small bench tools. |  |  | x |
| 5.5 Supervise people using high power hand tools and small bench tools. |  |  | x |
| 6. Use light industrial tools. | 6.1 Identify light industrial tools. | x | x | x |
| 6.2 Identify SWIs for light industrial tools. | x | x | x |
| 6.3 Operate light industrial tools. | x\* | x | x |
| 6.4 Instruct the safe use of light industrial tools. |  |  | x |
| 6.5 Supervise people using light industrial tools. |  |  | x |
| 7. Use large industrial tools. | 7.1 Identify large industrial tools. | x | x | x |
| 7.2 Identify SWIs for large industrial tools. |  | x | x |
| 7.3 Operate large industrial tools. |  | x | x |
| 7.4 Instruct the safe use of large industrial tools. |  |  | x |
| 7.5 Supervise people using large industrial tools. |  |  | x |
| 8. Apply first response rescue methods | 8.1 Demonstrate basic first aid knowledge specific to facility |  | x | x |
| 8.2 Demonstrate competence in managing emergency first aid specific to facility |  |  | x |
| 9. Manage machinery hazards | 9.1 Carry out machinery pre-use inspections. |  | x | x |
| 9.2 Carry out machine guard adjustment. |  | x | x |
| 9.3 Conduct workshop Risk Assessments. |  |  | x |
| 9.4 Sign off workshop Risk assessments. |  |  | x |

x\* Operated under supervision.

**Recommended UoA Training:**

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| --- | --- | --- | --- | --- |
| Unit Standard/ UoA Workshop | Description | User | Operator | Supervisor |
|  | Workshop Safety Brief | x |  |  |
|  | Workshop Staff induction |  | x | x |
|  | Category 1-2 specific equipment competencies | x | x | x |
|  | Category 3-5 specific equipment competencies |  | x | x |
| HRHURA  | How to undertake a risk assessment |  |  | x |
| HRSORA | Signing off on risk assessments. |  |  | x |

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| **Categories** | **1** | **2** | **3** | **4** | **5** |
| **Equipment Power** | **Low Power hand/small bench tools**(2-4 amp @240V,< 9V cordless) | **Medium Power tools** ( 150W to 350W)( <10 amp @ 240V, 14-18 V cordless) | **High Power portable****and small bench tools** (> 350W)(10-15 amps @240V,24-36 V portable, pneumatics, hydraulics) | **Light industrial tools**(typically bench top, >350W, pneumatics, hydraulics) | **Large Industrial Tools**(manual and NC- controlled) |
| **Examples** | Dremel toolsCordless drills under 14VPalm sandersSoldering irons/gunsHeat gunsHot melt glue guns3D printers | Jig saw3/8” hand drillCorded devices 250W18V-24V cordless drillsLaser cutters/engraversThermal foam cutters | Belt sanderFraming nailer350W geared drillReciprocating saw>18V cordless toolsMitre sawsRoutersAngle grinders | Small bandsawSmall drill pressSmall/benchtop milling machinesSmall/benchtop lathesHorizontal sawScroll sawBench grinderCircular saw | Full-sized milling machineFull-sized metal latheTable SawRadial arm DrillLarge drill pressLarge band sawSurface grinderPower shearCNC MillCNC lathe |
| **Workshop Access Control** | With permission of workshop supervisorBuddy system | Only when responsible person/monitor is present. | Only when responsible person/monitor is present. | Only when workshop supervisor is present. | Only when workshop supervisor is present.  |
| **Tool access control in uncontrolled areas** | Secured cabinet/room | Secured cabinet/room | Secured cabinet/room | Tool Power Lockout | Tool Power Lockout |
| **Supervision Requirements** | Oversight by individual with tool experience | Oversight by individual with tool experience | Oversight by individual with tool experience | Oversight by individual with **extensive** tool experience. | Oversight by individual with **professional level** experience |
| **Proficiency Requirements** | Workshop Safety Brief | Workshop Safety Brief Tool specific instruction | Workshop Safety Brief Tool specific instructionDemonstrated proficiency | Workshop Safety BriefTool specific instructionHands-on training and experience.Demonstrated proficiency | Workshop Safety BriefTool specific instructionExtended hands-on training and experience. Demonstrated proficiency |