

# ~ FABRICATION ~



ELECTRONICS

OPERATING INSTRUCTIONS

INTRODUCING

*the*



ARDUINO  
PROGRAMING



# TECH WORKSHOP H&S



## Access Levels

- Level 1 – Student Use AFTER Induction
- Level 2 – Student Use WITH Supervision
- Level 3 – Student Use WITH Counter-Signed PASSPORT of Supervisor or Instructor

Area dedicated to ICT and Technology Systems

## How to use area

- No EATING or DRINKING
- No RUNNING
- MUSIC HEAD PHONES must NOT be worn
- Know where EMERGENCY EXITS are
- ALWAYS use the correct PPE for your application
- Only use equipment AFTER RECEIVING TRAINING from a member of staff
- If you are unsure or have forgotten how to use machinery/equipment correctly please seek advice first
- REPORT ANY FAULTS to a member of staff
- PUT AWAY all tools that you have used REGARDLESS of whether you got them out or not
- DO NOT block gangways or fire exits
- WORK WITH fellow peers and COMMUNICATE WITH one another about what you are doing
- Appropriate shoes must be worn at all times
- Any electrical work, EXCEPT Arduino programming, should ONLY be done whilst a member of staff is present
- Lights should be turned ON for maximum visibility
- Switch OFF equipment, except computers, after use
- Students MUST NOT bring in their own chemical compounds or materials UNLESS they have been cleared as 'safe' for storage within the existing storage cabinets and an appropriate Data File on the material is held by the department

### High Frequency Welder

- For every HOUR of welding, take a 15 MINUTE break
- Whilst taking your break MAKE SURE the machine is OFF

### Computers

- TAKE REGULAR BREAKS
- TRY to maintain a straight seating posture

### 3D Printers

- DO NOT place your hand INSIDE the machine whilst it is operating
- ONLY collect 3D PRINTS if the machine has finished the current job or has been paused
- Printers MAY be left operating unattended over-night - with the approval of technical staff BEFORE starting the job - but NOT over weekends
- NEVER touch the extruder nozzles, they are extremely hot

### Power Supplies

- MAKE SURE channel switches are OFF BEFORE turning the power supply ON
- MAKE SURE to use the CORRECTLY coloured connecting cables, BLACK for 0 Volts, RED for positive Voltages
- BEFORE switching ON make a VISUAL CHECK for short circuits of your circuit board or component

### Soldering Irons

- NEVER touch any metal parts of the irons OR their cage GUARDS, they are extremely hot
- Goggles MUST be worn at ALL times when soldering
- Remember to switch OFF AFTER USE, the irons can be a fire hazard
- Place irons in their rack holders when not in use - and ONLY when cool
- USE the personal extraction units when soldering

### Mini CNC mill

- Check the INTERLOCK and EMERGENCY STOP are working before commencing a program
- MAKE SURE the vacuum cleaner provided is attached and is switched ON to extract dust BEFORE commencing a program

### Vacuum Former

- DO NOT place your hand INSIDE the safety cage whilst the machine is operating
- Check that the SAFETY INTERLOCK is working BEFORE attempting a molding
- Whilst collecting your finished form, DO NOT touch the heaters as they will still be extremely hot

### Stanley Knives or Scalpels

- To be used **ONLY** on the cutting mats provided – not work bench tops
- Use the supplied **SAFETY RULERS** to keep your fingers safe - normal flat rulers are **NOT** sufficient to offer protection
- Cut **AWAY** from yourself, where possible
- **DO NOT** cut towards other people
- **RETRACT** the blade **FULLY** before finishing

### Fire Safety

- Familiarise yourself with all fire exits
- Familiarise yourself with all fire alarm points
- In the event of a laser cutting fire, lift the lid and hit the red emergency stop button
- Raise the alarm
- Do not tackle a fire that is out of hand
- Do not use fire extinguishers unless trained or absolutely necessary
- Evacuate the building using the closest fire exits
- Do not alter your route in order to collect belongings
- Encourage others to leave and guide visitors
- Assist those with sensory/mobility impairment
- Close doors behind you
- Move a safe distance away from any building
- Stay out until told it is safe to re-enter

### Other

- Please notify a member of staff if you are experiencing other medical concerns, ie asthma, eczema, pregnancy, back problems

I verify that I have read and understood the information detailed within this document

Date

Name

Signature