

## **Engel Injection Moulding and Metal 3D printing Room**

**James Watt South Building**

### **CODE OF PRACTICE**

***The adoption and practice of good safety procedures is of paramount importance both for the health of fellow workers and for the integrity of the fabric of the laboratories in Biomedical Engineering.***

#### **1. Lab Safety Management Responsibilities**

- a) **Everyone** has a role in protecting the health and safety of both other lab users and themselves, and thus should be familiar with the **School's Safety Manual**.
- b) **Academic Supervisors** take full responsibility for the health and safety of their own group's research activities, and consequently must ensure their staff and students are familiar with both the content of this **Code of Practice** and the **School's Safety Manual** and apply its requirements.
- c) No research activities shall be carried out in the Injection moulding room, Room 223 JWS Building, without the prior permission of **Prof Gadegaard or Dr Peifeng Li**.
- d) No work shall be carried out until a **Risk Assessment** has been conducted by the research staff/students, **approved by Prof Gadegaard or Dr Peifeng Li** and the **Director of Safety**.
- e) An **electronic copy** of the approved Risk Assessment shall be sent to the Lab Responsible Person to be kept as record (note that this can be done using the online risk assessment system). A hard copy of the approved risk assessment shall be displayed next to the relevant research rig and equipment for inspection.
- f) **All lab users** should make themselves aware of the **general safety procedures** highlighted in the School's Safety Manual and of the location of safety equipment in the lab.
- g) These are:
  - a. In case of emergency, dial telephone number: **4444 (internal), 0141 330 4444 (external)**
  - b. **Emergency exits** are located at either end of the main corridor or via the JWNC.
  - c. The **fire extinguisher** is located in the main corridor on level 2
  - d. **First Aid kits** are in the Janitors box on Level 3 and in the Tuck lab on level 4

- h) Work outside normal office hours (including weekend working) requires the permission of your supervisor. This can be given by an e-mail trail for audit purposes in the event of an accident and can be for multiple or extended periods of time. If permitted, the out-of-hours working book located in the foyer of the Rankine building must be signed and the time recorded on arrival and the time of departure. Potentially dangerous operations **must never** be undertaken out-with normal hours **unless a second responsible person is present.** (Please read the safety regulations in the School's Safety Manual for more details.)

## 2. Practice of General Activities

- a) The experimental area must be **kept tidy and clean.** This is **NOT** the responsibility of the cleaners. Good housekeeping must be maintained by the lab users and be monitored by the responsible person of each area.
- b) **Food and drinks are not permitted in the lab.**
- c) Access to switch boxes and valves must remain clear and must not be blocked by equipment.
- d) Dedicated storage cupboards and areas must be used.
- e) Equipment must be placed in appropriate locations to safe-guard its integrity, minimise potential damage and to allow other researchers access to it.
- f) Once experimental work has been completed and the experimental setup is no longer required, the **experimental area must be cleared** in preparation for other experiments and researchers.
- g) **If it is necessary to remove equipment from the lab, permission must be given by your supervisor and the Lab Responsible person.**
- h) If equipment breaks down or is not working, report the fault to Prof Gadegaard. Do not attempt to repair equipment yourself.
- i) A fault with the fabric of the room, such as a lighting failure, should be reported through the Maintenance Request portal found on the Estates and Commercial Services webpage, <http://www.gla.ac.uk/services/estates/>.

## 3. Covid-19 measures

- 1) Guidance from the HSE, UK Government and Scottish Government to manage the risk related to Covid-19 pandemic must be applied to the Microscopy Lab. These include physical distancing, frequent hand washing and hygiene measures, cough etiquettes and face covering in enclosed public space.
- 2) Physical distancing within the Injection Moulding Lab means a capacity of 1 (one) person working in the room applies as general practise. In the case of an error developing during the injection moulding process, 2 (two) people are temporarily allowed to resolve the issues. In such circumstances it will be necessary for both users to wear a face mask.
- 3) Demand to use the lab will be managed by the Lab Guardian in collaboration with the Safety Coordinator. Collaboration will be required between lab users and Prof

Gadegaard to establish a rota where necessary. Impact on the overall capacity of the Rankine building will be reviewed by the Technical Services Manager.

- 4) Lab users must wash their hands regularly and wipe workstation surfaces, materials, and equipment at the start of their work and before leaving.
- 5) Emergency support (First Aiders and Fire Area Officer) might be constrained due to Covid-19 restriction on building capacity. Task risk assessments need to be reviewed to include the above measures and to review with personnel through the risk assessment, which work can be safely undertaken with reduced access to emergency support. A Covid-19 risk assessment template can be found here ([https://www.gla.ac.uk/media/Media\\_723618\\_smxx.docx](https://www.gla.ac.uk/media/Media_723618_smxx.docx)).

#### 4. Practice of Hazardous Activities

- 1) **Electrical connections** between different devices or equipment should be safe. If in doubt, speak with technicians in the Electronics Workshop (Rankine level 7).
- 2) To minimise the risk of **falling objects**, no equipment or lab materials should be kept on top of cupboards and file cabinets, particularly those next to the edge of the upper floor.
- 3) Fire hazards:
  - i. All **flammable materials** (gases, liquid and solids) should be stored and handled in accordance to the School's Safety Manual and relevant SEPS guidelines.
- 4) Explosion hazards when using compressed gases:
  - i. You should seek support from technicians when moving gas cylinders.
  - ii. All users of compressed gases should be trained.
- 5) Eye and laser safety spectacles should be used when appropriate.
- 6) If you are unsure how to correctly use an item of equipment, seek assistance from an appropriate responsible person(s).