

Local Rules for the Electronics Lab

1. Introduction

1.1 Location:

Cambridge Graphene Centre
9 JJ Thomson Avenue
Cambridge CB3 0FA
Ground floor, room 80
Phone: 01223 (7) 62352

1.2 Contact Details

Lab leader	Dr Antonio Lombardo Cambridge Graphene Centre Tel: 01223 (7)62385 Email: al515@cam.ac.uk
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1.3 Scope

These local rules cover the general use of the Electronics lab and its service room in the Cambridge Graphene Centre.

1.4 Authorised Users

Only authorized users can access the Electronics lab. Each equipment will require specific training given by a demonstrator approved by lab leader and the facilities manager. In order to use any equipment, a specific training must be given by an authorized instructor who will communicate to the lab leader once the trainee has attained a sufficient skills to use the equipment independently. All the users must ensure that care is taken when operating the equipment and report immediately to lab leader and facilities manager any fault. Access to equipment will be suspended in case of improper use of equipment or noncompliance to local and safety rules.

For each piece of equipment, lab users are divided in the following classes:

- **Managers (M):** full access to the equipment at any time. They are responsible to keep the equipment at the highest possible level of operation and are also responsible to liaise with lab leader, facilities manager and equipment manufacturer for any required maintenance. Managers have the authority to grant access to the equipment they are responsible after suitable training. They can also suspend users' access in case of improper use of equipment or noncompliance to local and safety rules.
- **Instructors (I):** experienced users who can train new users. Instructors report to the lab leader after a new user has achieved sufficient training to operate the equipment independently.
- **Regular users (R):** users who can work on the equipment independently. They can operate the equipment following standard procedures described in the document associated to each equipment. Regular users cannot train new users.
- **Occasional users (O):** users who rarely need to use the equipment and don't require independent access to it. They will require the supervision of a user from any of the above classes to operate the equipment.

It is the responsibility of the lab leader to keep an up to date list of users, which should be attached to this document and displayed in the lab.

Users of class M, I, R, O are allowed to bring guests into the electrical lab (e.g. to show equipment or to carry on measurement for collaborative projects. By doing so, the authorized user agree to take full responsibility for any damage caused by their guests. Guests are not authorized to use any equipment.

1.5 Description of Lab

The Electronics lab consists of an electromagnetically shielded room and a service room. All the instruments are located in the shielded room while the service room contains items (e.g. compressor) that might generate electromagnetic noise disturbing the experiments. Therefore the normal working area is the shielded room and users are expected to be in the service room only to switch on and off pumps, compressor, etc., which are located there. Communication from the shielded room is ensured by a phone and a network-connected PC located at the left corner of the room.

2. Procedures

2.1 Normal operation

Refer to user's guide documentation produced for each piece of equipment and instructors' training. Regular users can only perform standard procedures as described in the slides provided by the instructors. The lab can be used out of working hours for standard procedures (i.e. those described in the equipment guide), any other should be discussed with lab leader and facility manager.

No food or drinks are allowed in the Electronic lab at any time.

After each experiment, the lab should be left tidy. Each equipment should be left according to user's guide and training. Any rubbish produced (e.g. gloves) must be disposed in the provided bin. Sample left for longer than one day will be removed and might be disposed. Users not complying with such rules will have their access suspended.

2.2 Emergency shutdown

Emergency shutdown buttons are located both in the shielded room and in the service room. Equipment in the two rooms are connected to different circuit breakers so pressing the emergency shutdown button in the shielded room will not stop the equipment in service room. In the event of an emergency, leave the lab as soon as possible in accordance with the building safety procedures. If possible and safe, shut down the equipment in the service room by the emergency shutdown button.

3. Disciplinary measurements

3.1 Access suspension

Infringement of any of the above regulation will be notified to the lab leader and the facilities manager, who will decide appropriate disciplinary actions according to the severity of the infringements.