For Power Electronics Lab Demonstrators

If you are lab demonstrating in the Power Electronics Lab (Ian Ross Room 103), please take note of the following:

- There are a total of 12 main work stations. There is also the possibility of setting up another 2 work stations on the side benches, giving 14 work stations in total if required. Each work station can accommodate 2 students. The work stations consists of:

  - a Digital Storage Oscilloscope (DSO) and 2 probes
  - 3 x handheld DMM (Digital Multimeter), with probes
  - a tool box containing a kit of cables, probes, alligator clips, BNC cables and tools (cutters, pliers and wire strippers)
  - in the shelf under each bench is a power supply and rheostat (function generators are located in the shelves on the wall)

- Each of the work stations has its equipment labelled ie workstation 1 has all its test equipment , DSO leads, multimeter probes etc labelled 1 and so on for the other work stations.
- Please ensure the room is clean and tidy after the lab is completed. All cables, probes and equipment is to be returned to their proper place and no rubbish left in the room.
- Each work station has a full kit of cables, probes, alligator clips and tools (cutters, pliers and wire strippers). Please ensure that these are all present and returned to their correct location at the end of the lab. It is recommended that the checking of these tools and cables be done as part of the lab mark off.
- Oscilloscope probes are expensive (~$150 each). Ensure that students use appropriate care when using the oscilloscope probes. We have had problems with students loosing the probe clip and earth strap. Also there have been problems with students damaging the probe tips by pushing them directly into breadboards and snapping off the tip – they should be using the probe clip to connect to their circuit. Another problem has been, damaging the probe clips by soldering when they are still attached.
- No food or drink is allowed in the room, as with all labs at ANU.
- Enclosed footwear must be worn at all times.
- Take note of safety. Electrolytic capacitors can explode if incorrectly connected. Students and demonstrators are to wear eye protection at all times. If not wearing prescription glasses then safety glasses must be worn. Note it is strongly recommended that safety glasses are worn even when prescription glasses are used. The safety glasses are designed to fit over prescription glasses and not only provide better protection of eyes but will also protect the prescription glasses.
- There are emergency power cutoff switches at the end of the benches if needed. If a bench is without power this is probably the cause.
- If students are acting up or behaving in a dangerous/stupid way remove them from the lab.
- Equipment left under constant high load can overheat and be damaged but also cause a safety issue. Ensure that motor/load sets high power rheostats etc are not operated continuously.
- If you have trouble with any equipment and think it may be faulty contact the Electrical Technical Staff. If they are unaware that there is faulty equipment they cannot fix it. Fault diagnosis forms have been placed in the labs to enable logging of equipment fault details.

Equipment failures are rare, most of the time the problem is how equipment is being used. Carefully examine the experimental setup and try to determine the cause of the problem.

- Do not leave students unattended.
- Please ensure that students do not write, draw etc on the benches or test equipment.
- Lock the doors and switch off the lights and fans when leaving the lab, ensure all equipment is off – in particular soldering irons.
- You can contact the Electrical Technical Staff at any time, even during a lab.

Electrical Technical Staff:

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