NOTE: These rules are in addition to 'Laboratory Rules–A' which also apply in power laboratories.

These laboratories pose special safety problems because of the electrical hazards associated with 415 volt, 3-phase A.C. and 220 volt D.C. power supplies and the mechanical hazards associated with rotating machinery. Because of these hazards, each user of these laboratories must be familiar with the following procedures, which must be adhered to under all circumstances. Failure to follow these procedures or any action likely to cause injury to self or others will result in the exclusion of the person/persons involved from the remainder of the laboratory session.

1. Workstations in the laboratories shall be energised only when specific tests are to be performed, and, in the case of laboratory NG06, only after the demonstrator has checked the circuit connections. The workstation should be de-energised immediately after the tests have been completed. Workstations must not be left unattended while energised.

2. Circuit wiring must never be altered while the switchboard is live or while a machine set is rotating. This also applies to checking the tightness of terminal connections and reversing the connections to measuring instruments. All such adjustments must be made with the switchboard dead and the machine set stationary.

3. It is occasionally necessary to use portable switches. On these occasions the pole change contactor should be used and it is essential that, before using it, its operation and correct use be understood.

4. When portable instruments (such as multimeters) are used to monitor the voltage at various points in the circuit while it is energised, special-purpose insulated probes must be used.

5. The guards around the shaft couplings on the machine sets must always be in position when the sets are rotating. If a guard is removed for any reason then it is the responsibility of the student/students concerned to ensure it has been replaced after the test or before leaving the laboratory.

6. Watches with metal bands, bracelets, earrings and finger rings are not permitted to be worn in these laboratories.

7. Close-fitting, closed-toe shoes must be worn in workshop and laboratory areas. Shirts that cover the back and shoulders must be worn in workshop and laboratory areas. In particular sandals, thongs, backless or loose fitting shoes, tank tops and sleeveless T-shirts are not permitted. Long hair must be tied back out of the way. It is recommended that long trousers and long sleeved shirts be worn. Loose jewellery must be secured or removed.

8. All injuries sustained while working in laboratory NG06 must be reported immediately to the demonstrator who will take appropriate action and make out an incident report if necessary.

9. Demonstrators must be present at all times in lab NG06. If they need to leave the lab for short periods, a workshop staff member will be present.
The following rules apply for work in the Power Projects labs NG08 and NG24 only.

10. If using high power AC (415V 3 phase) or high voltage DC (50V and above), you must attend a CPR (resuscitation) demonstration. In addition each student must complete the Power Laboratory Safety Induction to the satisfaction of the workshop supervisor.

11. Work in these laboratories is to be carried out only during normal hours ie. 9am-1pm, 2pm-5pm.

12. If no member of the workshop is present in the workshop NG07, students will be advised that the staff will switch off high voltage supplies; students may only use the general-purpose outlets for powering both instruments and low voltage electronic circuits.

13. Equipment in the Power Project Labs must not be removed from the lab without the permission of the workshop supervisor.

**Warning:** It must be remembered at all times that the simultaneous touching of live terminals and earth is potentially fatal. There are large areas of earthed metal present – the frames of the rotating machines, the induction motor starter and the switchboard facia; a coat of paint on these does not constitute adequate insulation.

All incidents of electric shock or suspected electric shock must be reported to the demonstrator or workshop supervisor immediately.

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**Qualified First Aid Personnel**

First aiders in the School are listed on the Emergency Procedures notices around the School.

**Evacuation Procedure**

On hearing the evacuation signal please leave the building in an orderly manner and assemble at the designated assembly point. The assembly area is listed on the Emergency Procedures notices around the School. Follow the directions of the emergency wardens or your demonstrator.

*Under no conditions must you re-enter the building until the chief warden informs you that it is safe to do so.*

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**Acknowledgement**

You must complete the electronic sign-off in MyUni to acknowledge you have read, understood and will abide by these rules.

Assoc Prof Cheng-Chew Lim
Head of School