22 March 2004

Dear APACE VFEG colleague,

As the nominated Laboratory Supervisor, much of the responsibility for the establishment of safe work practices and procedures in the lab falls on me.

In order to comply with various UTS Environment Health and Safety Policy, as well as Faculty of Engineering Policy, I believe it is appropriate for you to be better informed and trained on matters regarding your responsibilities, general lab rules, procedures, and hazards.

Please find attached a Safety Induction Package that I have adapted from material produced by the Faculty of Engineering.

Could you please read it, and be available over the next couple of weeks to discuss the contents, and how it will impact on you and your work in the laboratory.

The intention is to inform and identify ways you can assist me maintain a safe working environment for yourself and the others around you.

Best regards,
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Faculty of Engineering Laboratories

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SAFETY INDUCTION PROCEDURES AND RULES FOR TECHNICAL & PROFESSIONAL STAFF

INTRODUCTION

These guidelines explain duties and responsibilities that Technical & Professional staff accept when they commence work in the Faculty of Engineering.

Engineering laboratories contain plant and equipment that have the potential to cause serious injury. Under the Occupational Health and Safety Act, the University has a responsibility to ensure a safe workplace and to provide training, information and supervision to all students and staff who work in the laboratories.

The Faculty of Engineering is committed to providing a safe and healthy workplace for students, staff and visitors and adopting a socially responsible approach towards protecting and sustaining the environment.

Promoting a safe, healthy and environmentally sound environment is the responsibility of all staff.

These Guidelines outline the procedures and responsibilities for:
- Hazards
- Emergencies
- Accidents/incidents

And contain information on the following specific hazard(s):
- Hazardous Waste disposal
- Electrical safety
- Manual handling
- Chemical Safety

This is consistent with the Faculty of Engineering Action Plan, the University’s EH&S Policy, and the NSW Occupational Health and Safety Act.

Always keep laboratory safety in mind - your health and well being and that of your colleagues depends on it.
RESPONSIBILITIES

All staff, students and visitors are responsible for EHS legislative compliance by:

- Looking out for hazards, reporting them to the designated responsible person of the work area and helping to fix hazards
- Taking action to avoid, eliminate or minimise risks
- Following safe work methods and using personal protective equipment as required
- Seeking information or advice as necessary – particularly before carrying out new or unfamiliar work
- Reporting accidents and incidents to the supervisor of the work area
- Contacting Security to report emergencies (dial 6).
- Disposing of any hazardous wastes in a safe and approved manner
- Not willfully placing at risk the health, safety and welfare of others
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GENERAL LABORATORY SAFETY RULES

Members of the Technical staff supervise all Faculty of Engineering Laboratories. Students requiring access to laboratories must report to the staff member responsible for the area they wish to work in. Technical staff member’s names are located on the door to the laboratory.

Supervisors of the various laboratory areas can be found on the Faculty’s R drive under (R Drive – Intranet – Programs – Fac admin – Staff admin – Groups – shortcut to staff groups) to laboratories layout.

Students should avoid working alone in a laboratory and not perform experiments at night or on the weekends without permission. Students should always have someone there with them in case of an emergency.

Some Faculty laboratories do not permit student access after hours or on weekends.

Technical staff supervisor for laboratory areas will advise students if access after normal hours is permitted.

All laboratory doors contain a poster with information on:
- Safety hazards in this area
- Precautionary measures required, and
- Reporting and maintenance telephone contact numbers

It is the responsibility of the academic supervisor to be fully aware of all after-hours laboratory work being performed by a research student, and to ensure the safe undertaking of this work.

It is the student’s responsibility to inform the Academic supervisor and Technical staff supervisor of intended after hour’s experimentation.
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Remember some Faculty laboratories do not permit student access after hours or on weekends. Home telephone contact would be desirable in case of problems arising.

Children are not permitted in any laboratory at any time.

Students must obey any instructions from Technical staff or Academic supervisors in the Faculty’s laboratories.

Safety Footwear is a requirement in the Faculty’s laboratories. Thongs and open toed shoes are not considered adequate footwear.

Any new work procedures in laboratories and workshops require an EH&S Risk Assessment to be evaluated. Students doing experimental work in laboratories must check with the Technical staff supervisor for that area before commencing work. Laboratory supervisors will assist with the assessment of any new work procedures.

All hazardous materials used within the Faculty have a material safety data sheet (called MSDS sheets), no chemicals or hazardous materials are to be purchased or used without the permission of the Technical staff supervisor for that area. Students using chemicals or hazardous materials in experimental work must read the MSDS sheets for the material and obtain the required safety equipment before commencing work. Simple materials such as Kerosene, Methylated Spirits, Petrol, Acetone, etc are considered chemical or hazardous.

If there is no MSDS sheet staff or students cannot start work. Most MSDS sheets are supplied with the chemical or hazardous material when purchased. Please see the Technical staff supervisor for that area if you have a problem obtaining an MSDS sheet for your work.
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All hazardous waste must be disposed of safely and responsibly. All laboratory Technical staff supervisors are responsible for the disposal of all waste in their areas. Students must advise Technical staff when waste materials are ready for disposal.

SITE WORK

Students working off Campus “on site” performing experimental work, must have “site” safety induction before commencing work.

If there is no “site” safety induction procedure contact your Academic supervisor who will arrange a member of Technical staff to go through a “site” safety induction procedure with you.
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PROCEDURES

HAZARD REPORTING

Report immediately a hazard that has the potential to cause death or serious injury / illness, or might cause harm to a number of people. Dial ext 6.

If you discover a hazardous situation, which has the potential to harm someone, tell your supervisor as soon as possible. If you can safely fix the hazard, then fix it yourself.

Hazards may be reported by writing the details in the laboratory Hazard Report Book, verbally or by email to the laboratory Technical staff supervisor.

ACCIDENT/INCIDENT REPORTING

Reporting Accidents / Incidents:-

- All accidents / incidents must be reported to the Technical staff supervisor for the laboratory, or the Academic staff member in charge of the class or activity. After hours call Security by dialing ext 6.

- Accident / incident forms must be completed once the first aid has been provided.

The person involved in the accident / incident must complete sections 1, 2 & 3 of the Accident/Incident Report Form (available in EHS resource kit in your laboratory) and give it to their Academic supervisor or Technical staff laboratory supervisor as soon as possible.
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If a staff member or student sustains a work related injury or illness their Academic supervisor or Technical staff supervisor should immediately contact the Environment, Health and Safety Branch by either

a) calling ext 1056, 1326 or 1062 OR
b) Faxing sections 1, 2 & 3 of the Accident / Incident form to ext 1327.

FIRST AID

- Remember (Dial 6 in all emergencies) this will contact the University Security service. All Security Officers are trained in First Aid.
- Seek first aid immediately.
- There are a number of staff within the Faculty of Engineering who are trained first-aid officers. Check the First Aid Poster on the door of the laboratory to find out who the first aid officer in that area is.
- If an accident occurs in a laboratory area contact the First Aid Officer whose name appears on the laboratory Environmental Health & Safety sign on the door. If the accident is an emergency and the laboratory First Aid Officer cannot be contacted, Dial 6 and speak to Security.
EMERGENCY RESPONSE

The University has established procedures for the evacuation of buildings in an emergency.

In the case of fire:
- The smoke detectors will set off the Evacuation System and the Fire Brigade is called automatically.

The Evacuation system alert consists of two tones,
1) Standby tone - a long high pitched siren sound (Prepare to Evacuate)
2) Evacuate tone - a shorter, harsher sound accompanied by a voice message advising Evacuation of the Building.
- Do not attempt to combat the fire – this should be left to professionally trained personnel.
- Staff are to take any students or visitors with them during an evacuation of the building.
- Assist any person with a disability.
- Only take your immediate belongings, do not waste time.
- Evacuate the building via the fire stairs or signed exits. Do not use lifts.
- Obey directions from Security Officers or fire wardens.
- Move quickly – do not run.
- Do not return to the building until the “all clear” is given. This would normally be advised by the Security Officer on duty, or the advice of the Emergency Services personnel in attendance.
PERSONAL PROTECTIVE EQUIPMENT

- Laboratory coats or overalls should be worn in the laboratories.
- Safety Footwear is a requirement in the Faculty’s laboratories. Thongs and open toed shoes are not considered adequate footwear.
- Some of the Faculty’s laboratories require students working in the area to have their own Personal Protective Equipment. Laboratory Technical staff can advise students what equipment is required and where to obtain it.

HAZARDOUS WASTE DISPOSAL

The University has a hazardous waste disposal system, with regular collections of chemical waste and clinical waste.

Liquid chemical waste

1. Identify and Segregate Waste.
2. Collect compatible liquid waste in 20L plastic HDPE containers. Containers are to be labeled with the appropriate ‘Hazardous Waste for Disposal’ sticker.
3. Organic waste must be neutralized before disposal.

Broken Glass

There is no glass recycling facility on this campus (Pyrex cannot be recycled with normal soda glass). Place any broken glass into the designated glass bin in your laboratory, NEVER in the normal waste bin.
Sharps Waste

All needles, scalpel blades and other items which may stab or cut skin must be placed in special sharps bins or containers in the laboratory, NEVER in the normal waste bin. Sturdy yellow sharps containers are available from the Central Store.

Do not overfill sharps containers.

In disposing of broken glass, sharps or any other dangerous solid waste, remember that we have a duty of care with respect to the cleaners who empty our bins. Anything that can protrude from the thin plastic waste bag and can cause injury to the cleaner, through stabs, cuts or abrasions, can have serious consequences for the cleaner and for us. So place only innocuous waste only in normal waste bins.

Engineering Hazardous Waste Contacts

Building 1  Richard Moore x2366
email  Richard.Moore@uts.edu.au

Building 2  David Hooper x2518
email  David.Hooper@uts.edu.au
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HAZARDS

ELECTRICAL SAFETY

All electrical equipment and instrumentation is regularly checked for compliance to electrical safety requirements. Equipment identified as faulty is removed from service, a "Danger unsafe item tag" is attached, and the equipment is sent away for repair or disposal. Equipment that has passed the testing is tagged to show the date tested and the date due for retesting.

**Do not use a piece of equipment with an out of date tag or a red "Danger - unsafe item" tag.**

MANUAL HANDLING

Manual handling refers to any activity which requires a person to use force to lift, lower, push, pull, carry or otherwise move, hold or restrain objects (including people and animals).

UTS has a legislative requirement to:

- identify the areas where there is a risk of injuries arising from tasks involving manual handling tasks
- take action to minimise manual handling risks

In order to reduce the risk of manual handling injuries in your work area

- eliminate manual handling tasks by changing the equipment or materials in use

If this is not possible, decrease the risk by

- changing the flow of jobs to minimise the amount of handling involved
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- altering the layout of work areas to avoid twisting, side bending or excessive reach
- reorganising storage areas so that heavier and frequently used items are stored between shoulder and knee height
- using trolleys or other suitable equipment to move heavy or awkward items
- always following safe work procedures provided by your supervisor

A number of Faculty of Engineering Technical staff have been trained in the use of Cranes and Fork Lifting equipment. Please contact the Technical staff supervisor for your area if any of this equipment is required.

CHEMICAL SAFETY

Chemicals that pose a risk to health and safety in the laboratory include both Hazardous Substances and Dangerous Goods. Each of these terms is defined by legislation. A list of hazardous substances used in each lab is available in a folder, along with Material Safety Data Sheets (MSDS) and chemical risk assessments. This is kept with the EHS resource kit for that laboratory.

Information about the hazardous properties of a large number of chemicals is available on the Chemwatch database. Chemwatch can be found at http://www.chemwatch.uts.edu.au. Chemwatch is a good source of MSDS’s when manufacturers MSDS’s are not available.

Labels and Material Safety Data Sheets (MSDS)

Before working with a new chemical you must read the container label and the MSDS that comes with that chemical. These will show you if the substance has any dangerous or harmful properties. You can also look up the Chemwatch database to check the properties of a chemical.
MSDS’s should be requested from the supplier when a chemical is ordered. The supplier has a legal obligation to provide an MSDS. These MSDS can then be kept in the lab MSDS folder.

The MSDS will tell you whether the chemical substance is ‘hazardous’ or not.

Any decanted substance that is 'hazardous' must be labeled according to regulatory requirements. This can be done simply by:

1. finding out if the substance is hazardous by reading the MSDS,
2. then print out a 'microlabel' using Chemwatch and apply it to the container with contact.

Copies of pre-printed labels for many chemicals are also kept in the lab with the MSDS’s.

Risk Assessments
There is a legal requirement that risk assessments must be carried out for each laboratory class experiment, student capstone project, research project and any 'hazardous substance' used in each work activity. The purpose of conducting a risk assessment is to estimate the risk associated with the work activity or use of a hazardous substance so that controls can be identified to minimise the risk.

Conducting a risk assessment
Technical staff supervisors will advise staff how to carry out a risk assessment.
DECLARATION

I have read and fully understand the above procedures and rules on pages 1 to 14 in the document entitled, “SAFETY INDUCTION PROCEDURES AND RULES FOR TECHNICAL & PROFESSIONAL STAFF” version 1 dated June 12, 2002

Signed.

---------------------------------------  (Staff Member)

---------------------------------------  (Technical staff supervisor)

---------------------------------------  (Date)