



ANU College of Sciences

**Research School of Physics (RSPHys)**

# **GUIDE TO SAFETY**

# **RSPE Guide To Safety**

## **Plant Pre-purchase Documentation**

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# RSPE Guide To Safety

## Introduction

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This Guide to Safety for RSPHys is a resource that will assist you safely undertake Work, Health, Safety (WHS) tasks (formerly known as OHS). It is not intended to be an exhaustive and complete safety document, but to give quick access to basic information and links to ANU safety webpages. The ANU Health and Safety Management arrangements (HSMA) are aligned with the Commonwealth Work, Health and Safety Act 2011, (WHS) implemented in January 2012. The University's management commitment can be viewed [here](#).

Under University policy and Commonwealth law administered by [Comcare](#), the management and staff of ANU are required to put in place safe and healthy systems of work.

### **COMCARE - Work Health Safety Act 2011**

#### ***All workers have four key duties (this includes staff and students):***

- *Take reasonable care of your own health and safety.*
- *Take reasonable care that your conduct does not adversely affect the health and safety of others.*
- *Comply, so far as you are reasonably able, with any instruction given by supervisors and managers.*
- *Cooperate with reasonable notified policies and procedures -> (especially special ones developed for your area).*

Although School management (through the Director, heads of departments, research group leaders, and line supervisors) are primarily responsible for this process, legislation requires, and common sense indicates, that all employees should contribute to the design, implementation and maintenance of safe systems of work. The processes of cooperation and consultation on Work Health and Safety (WHS) matters takes place through normal supervisor-staff communications and through the deliberations of the [RSPE WHS Committee](#).

The technical and managerial requirements for safe laboratory operations are given in the relevant Australian Standards, the codes of practice published by Comcare, and WHS policies of the University. The School has highly qualified scientists, mechanical, electrical and electronics staff who can assist you. RSPHys contacts for Emergency situations including First Aid; Wardens; etc can be found [here](#).

Relevant safety training courses run by the University WHS Branch (or contractors) should be successfully completed by all staff approved to work in laboratories using ionising and non-ionising radiation, lasers, chemicals, corrosives, manual handling work, confined spaces etc..

# **RSPE Guide To Safety**

## **Work, Health and Safety Commitment**

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The Research School of Physics (RSPHys) undertakes research and teaching activities at the highest international levels and is committed to providing staff, students, visitors and contractors with a safe and healthy work environment in its duty of care.

Through the leadership of its senior staff and the commitment and active engagement of all staff members, the Research School of Physics and Engineering aims to achieve this objective by ensuring:

- Compliance with all relevant occupational Health and Safety Legislation including the OHS Act, National Standards and Codes of Practice and the ANU's Health and Safety Management Arrangements.
- Integration of health and safety issues into RSPHys activities and planning processes.
- Provision of adequate resources, including financial, to facilitate the fulfilment of Occupational Health and Safety responsibilities.
- Encourage a risk management approach to safety by hazard identification and elimination, or control, as far as practicable.
- Encourage the reporting of incidents, hazards and near misses (through ANU HORUS).
- Provision of current information, and supervision for all staff and students to enable them to work and study in a safe and healthy manner. Encourage appropriate Health and Safety training for all staff.
- Effective communication and consultation with appropriate stakeholders to enable resolution of Health and Safety issues through established consultative mechanisms.
- On-going evaluation and monitoring of Work Health and Safety performance, through consultation with the ANU Work Environment Group (WEG). Undertake monitoring and analysis of incident and hazard reports.

This statement shall be subject to periodic review in consultation with relevant parties' agreement.

Prof. Tim Senden

Director

28 July 2015

Version 1.0 Review 2018

# RSPE Guide To Safety

## Access To Buildings in RSPHys and After Hours Approval

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### Approval process for after hours working in RSPHys.

Normal business hours in RSPHys are 8.00am to 6.00pm, Monday to Friday. It is recommended that all work be conducted during these hours where possible. During these hours, there is appropriate coverage in regard to First Aid, Security and Warden coverage. Any work after hours will be restricted due to staff availability in regards to safety practices, and therefore ANU Security cannot be relied upon to cover emergencies out with these business hours. RSPHys staff and students must understand their WHS responsibilities and understand the requirements in the event of an Emergency. All School/Division Inductions and mandatory training must be completed, the list of mandatory course are described below. These can be found on the ANU PULSE website:

- University WHS Induction
- Local WHS Induction (appropriate to your area)
- WHSMS for Managers and Supervisors
- WHS for Workers and HDR Students
- ANU WHS Risk Management

Access to buildings after-hours (6:00pm - 8.00am weekdays and all hours on weekend) is by approval only from RSPHys WHS and your direct supervisor. Once approved, access can be arranged through the RSPHys Building Custodian.

### Laboratories/Workshops

All after hours work will be approved by RSPHys WHS and your direct supervisor. Access to laboratories or workshops will not be approved until the induction and mandatory training for that area has been completed and the appropriate risk assessment and safe work procedure has been implemented. To understand further the risks associated for after hours working, please see the RSPHys After Hours Risk assessment, [link here](#).

The generic risk assessment and safe work procedure can be found below:

[RSPHys Generic Risk Assessment Template](#)

[Safe Work Procedure Template](#)

To further reduce the risk of after-hours working to RSPHys staff, it has been deemed necessary not to authorize the following procedures:

- Chemical Processes

The following must have a buddy system implemented, minimum 2 people in the lab/area where the activity is taking place.

- Cryogenics
- Filling of Dewars
- Laboratory activity/task
- Workshop/Machinery activity

*Please not that any activity must have an identified residual low risk in the risk assessment for after hours approval.*

If you must work after hours, you must have prior approval from your supervisor and RSPHys WHS and what you're planning to do and where you will be. As a general rule **do not** work alone in the lab or workshop and no high risk activities may be conducted out of hours.

### Office Work After Hours

Approval for office after hours work in RSPHys will be granted by WHS Physics. Please send the request through to [whs.physics@anu.edu.au](mailto:whs.physics@anu.edu.au) and WHS will send an acknowledgment email which will state the following:

- RSPHys personnel must read the RSPHys After Hours Risk Assessment. [Link here](#).
- RSPHys personnel must have completed the mandatory ANU WHS training modules through ANU PULSE. [Link here](#). The mandatory course are detailed above.
- RSPHys personnel must be aware of the practices required in the event of an Emergency Evacuation. [RSPHys Emergency Evacuation Procedures](#)
- RSPHys personnel must be aware of their responsibilities in the event of a first aid incident working after hours. For after-hours attention, it is advised to call for an Ambulance on (0)

# RSPE Guide To Safety

## Access To Buildings in RSPHys and After Hours Approval

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000 or 112 (from a mobile phone). When possible, advise ANU Security x52249 as they are equipped and trained in first aid.

- Approval from your direct supervisor for after hours working.
- Where possible, work to be done at home after hours.
- Where possible, have direct communication (phone, email) with your Supervisor when entering and leaving the building.
- Where possible, have a buddy system in place, minimum 2 people in the area.
- Person must stay in their designated after hours work area.
- They must not access any high risk labs/areas.

Please include in your email request, your department, supervisor and office location.

Children are not allowed in University buildings where hazardous locations or restricted locations exist, unless special arrangements are made by the Budget Unit management to ensure children will not enter hazardous locations or restricted locations within the building, or be exposed to hazardous agents.

The general public are not allowed in University buildings where hazardous locations or restricted locations exist, unless special arrangements are made by Budget Unit management to ensure the public will not enter hazardous locations or restricted locations within the building or be exposed to hazardous agents.

***Employee responsibility: It is important that an employee does not inadvertently invite an individual, who is not a University employee or approved visitor, into a location that is hazardous or otherwise restricted.***

# RSPE Guide To Safety

## General housekeeping

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### Offices

- There is thermal control in all office areas. Personal heaters are not permitted. If you have any problems with the temperature, please log a job in the [maintenance system](#).
- Users must report any broken furniture or equipment, and remove from use immediately.
- Keep the work area tidy, and to ensure privacy is maintained, always lock your computer when leaving the area, especially if the office is shared or in an open area.
- The use of privately-owned electrical equipment is discouraged. Any non-ANU owned electrical equipment must be tested and tagged before being used on site at RSPE. Contact your local technical staff or administrator for more information.

### Ergonomics

Ergonomics is the design of the workplace, in this instance, it is in relation to the workstation; how it is set up and how you work on a daily basis. Improper set up of a workstation and practices can lead to injury, discomfort or can exacerbate existing conditions.

The ANU [injury prevention advice](#) page provides tips about the workstation set up, information can be found on the right hand side of this page.

It is recommended that all personnel complete the **ANU course on Office Ergonomic Essentials** on [Pulse](#).

If at any time you have any concerns about equipment such as work station, ergonomic chairs, repetitive tasks, posture, pain, or stress, your first point of contact should be the School's O.S.L.O. ([Occupational Strain Liaison Officer](#)) or contact the WHS team at [ohs.rspe@anu.edu.au](mailto:ohs.rspe@anu.edu.au)

### Manual Handling

Working with RSPE may require you to do various tasks that involve, pushing, pulling, lifting, or lowering of equipment or items. Performing these tasks incorrectly may cause severe injury. It's important to know your limitations and to learn how to manually handle items correctly.

It is recommended that all personnel complete the **ANU course on Manual Handling (IMHR01)**

### Kitchen, bikes and common areas

- Users should clean any spills on tables, microwaves and fridges immediately. All kitchens have paper towels, but if additional cleaning equipment is required, visit Reception.
- Please respect common areas and keep it tidy after use
- Bicycles are not permitted in the buildings. Please see the Maintenance team for access to the secure bicycle storage areas in RSPE.
- ANUGreen has rolled out a [Timely Treadly](#) program, in which you can book out a bicycle for use on campus. See Reception to book out the bikes.

### Security

The ANU campus is relatively safe, however incidents can occur at any time or place, and it's important to remain vigilant. ANU offers several services to help you stay safe on campus. All services can be found [here](#).

If for any reason you have a security or safety concern, call **ANU Security on 612 55249** who are available 24/7.

# RSPE Guide To Safety

## RSPHys Induction / Training

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**Please be aware that currently RSPHys WHS are in the process of creating an online centralized Induction process to cover our Tier 2 School/Service/Divisional WHS Induction requirements. This will be through the ANU PULSE website and will negate the need for face to face inductions and will provide a more efficient process of induction to new and existing staff in RSPHys. We are aiming for this online induction to be operational by the end of Q1 2021.**

**In the interim, can all departments use the Tier 2 and Tier 3 templates for their future induction process. Please document these and send the completed forms to [whs.physics@anu.edu.au](mailto:whs.physics@anu.edu.au)**

**To also prepare for this changeover to University prescribed templates, can all departments send through their current staff induction completions to [whs.physics@anu.edu.au](mailto:whs.physics@anu.edu.au)**

### **Induction**

General school orientation is conducted every Monday at 10:00am.

All new starters are invited to meet at reception to have a short tour of the School's central areas and receive a welcome pack.

Bookings are not required.

Specific inductions to laboratories, workshops and other spaces will be carried out by the department.

The WHSMS handbook implements an Induction process and is classified into three Tiers, including:

- University WHS Induction (Tier 1)
- School/Service/Divisional Induction (Tier 2)
- High Risk Areas (Tier 3)

Description of High Risk Areas are as follows:

- Laboratory – chemical, biological, radiation, laser, science, medical, engineering, nanotechnology, OGTR certified GMO, PC1-4, teaching laboratories;
- Chemical & Radiation Stores;
- Workshop – machinery, robotics, plant;
- Clinics;
- Plant Room;
- Quarantine, Mortuary and Dissection facilities;
- Radiation Facilities (such as Heavy ion accelerator);
- or any other areas determined to be high or extreme inherent risk by risk assessments of activities conducted in the areas.

These inductions are to be given to all new staff, students and visitors, where appropriate, and will cover the requirements for WHS information such as first aid, emergency protocols and about the hazards that are present in the area.

All new staff and existing staff must complete the mandatory University WHS Induction through this link [ANU PULSE](#)

For links to information and documents on the Induction process, please follow this link to the [WHSMS Chapter 3.2 WHS Induction Process](#)

Induction Templates can also be found here:

[Tier 2 Induction Template](#)

[Tier 3 Induction Template \(High Risk Area\)](#)

### **Training**

Initial training needs are to be identified during this process appropriate to the department and your role within that department.

Please see below for the mandatory course requirements for all RSPHys personnel.

- University WHS Induction



# RSPE Guide To Safety

## RSPHys Induction / Training

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- Local WHS Induction (appropriate to your area)
- Comcare Work Health and Safety for Managers)
- WHS Due Diligence Framework
- ANU WHS Risk Management Training

*Access to laboratories or workshops should not be approved until the induction and mandatory training for that area has been completed.*

For many of the activities carried out in RSPHys it is essential that the appropriate WHS training is undertaken. Training within ANU can be found on three different platforms:

- [HORUS](#)
- [Pulse](#)
- [Wattle](#)

ANU has developed a [training matrix](#) to assist in determining what course's should be undertaken. For WHS trainings not found within ANU such as, forklift training, health and safety representative training, and others, speak with the supervisor / relevant Head of Department or the WHS team. All other training can be found [here](#), or by searching through the aforementioned platforms. If you cannot log in or enrol in a course, speak with your supervisor in the first instance.

### **Induction Procedure for Accessing Restricted Areas for service personnel**

The department or work area where repair or service work is to be undertaken shall communicate the expected service type and access times widely to all members of their local department or area. The person responsible for the laboratory / area and who provides the technician, visitor or contractor with access, is required to induct that person into the area and ensure the area is safe for work to proceed.

If a safe working environment cannot be provided and/or a hazard/danger eliminated (e.g. equipment cannot be turned off), the lab/area supervisor or his nominated representative person must accompany the person at all times.

# RSPE Guide To Safety

## Emergency Procedures

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### Emergency Control Organisation (ECO)

An ECO is a team of people that are employed within a building who take control on the declaration of an emergency. An emergency may constitute as:

- A fire;
- Evacuation of any kind;
- Chemical spills;
- Bomb threat;
- Suspicious packages';
- Personal threat;
- Personal injury;
- Active shooter situations.

The [ECO](#) consists of a Chief Fire Warden, Deputy Fire Warden, Floor Wardens and First Aid Officers, as well as outside agencies such as ACT Fire & Rescue.

In the event of an emergency you will need to follow their instructions and not hinder the safety of others.

For preparedness, familiarise yourself with the evacuation maps displayed throughout the building, this shows the exits and location of the designated emergency assembly point.

An [ANU Security emergency flip chart](#) should be provided upon introduction to the school. If you do not have one, please contact the WHS team at [whs.physics@anu.edu.au](mailto:whs.physics@anu.edu.au)

Ensure you familiarise yourself with the contents of the flip chart as this provides guidance about what to do in the aforementioned emergencies.

### Raising the alarm

- Any potential emergency should be immediately reported to the [Chief Warden](#).
- By breaking a red break-glass alarm button (if nearby)
- Contact **ANU Security 52249**
- Dial 0 000

Many Laboratories within the School are fitted with one or more alarms, interlocks or warning devices.

Familiarise yourself with the devices fitted in your area. You must obey any warning signs, and evacuation signals.

Some areas have restricted access. Never enter a restricted area unless you are authorised.

### Evacuation

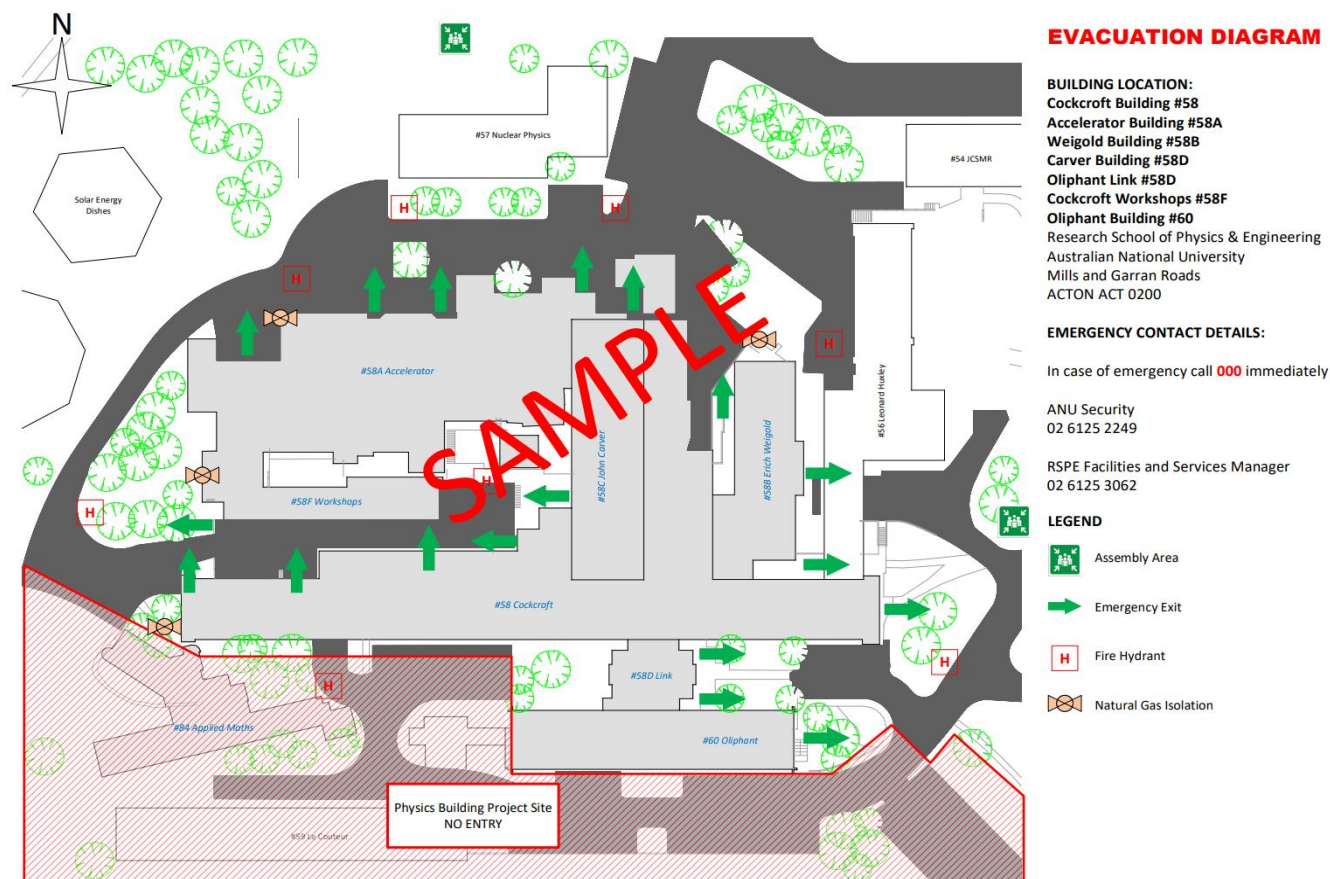
When an alarm has been initiated, a 'whoop whoop' tone will be heard, this means that you must evacuate **immediately**.

- Cease all work immediately and turn off any equipment if possible
- Collect your personal valuables, medication, car keys, mobile phones etc and leave the building via the closest exit if safe to do so.
- Congregate at the designated emergency assembly point.
- Floor wardens will be assisting occupants to vacate the building
- You must remain in the assembly area until the 'all clear' is given by the Fire Brigade.

### EVACUATION ASSEMBLY Areas (RSPE South)

# RSPE Guide To Safety

## Emergency Procedures



### First Aid

The school has several trained and certified [First Aid Officers](#).

Parasol is the provider of first aid supplies and conducts 6 monthly checks for all the kits within RSPHys.

For after-hours attention, it is advised to call for an Ambulance on (0) 000 or 112 (from a mobile

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## Emergency Procedures

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phone). When possible, advise ANU Security x52249 as they are equipped and trained in first aid.

### **First Aid Facilities**

There is a first aid room located in the Cockcroft Building Rm 3.11 (Reception desk level) and is clearly marked by a green sticker with a white cross. It is equipped with a bed, sink and other facilities required under the relevant legislation. It also contains a defibrillator and oxygen unit as well as a collapsible stretcher, emergency child-birthing kit and a fixed cabinet containing first aid supplies.

Access to the First Aid Room and its equipment is restricted to the First Aid officers only. Each First Aid officer has been issued a key and is able to access the room to restock first aid kits and to attend to casualties if needed.

In laboratories that use hydrofluoric acid (HF) a HF first aid kit is provided with specific supplies for HF related injuries.

Eye wash stations and showers are accessible near all laboratories and are checked and maintained by Facilities and Services monthly.

# RSPE Guide To Safety

## RSPHys Work Health and Safety Committee

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RSPHys has a [Work Health and Safety Committee](#) that will be structured around the following key risk categories within the school:

- Hazardous Chemicals
- Plant / Equipment / Machinery
- Non-ionising Radiation
- Ionising Radiation
- Electrical / Electronic
- Office Environment

The main duties of the WHS Committee are to:

- Facilities cooperation and coordination of WHS matters between workers and management,
- Assist in the development / consultation on WHS processes, procedures and actions,
- Meet 4 times per year to discuss WHS issues within, or effecting the school, with the aim of establishing proactive and effective safety strategies.

Previous RSPHys WHS Minutes can be viewed [here](#).

**As part of RSPE's current review of WHS committee make up. the following people have nominated themselves to be representatives / health and safety representatives, representing the workforce in their respective hazard groups.**

<b>Office</b>	<b>Ionising</b>	<b>Non-ionising</b>	<b>Chemicals</b>	<b>Plant/Equip</b>	<b>Electrical</b>
Luda Mangos	Tim Sawkins	Dimitrios Tsifakis	Huma Latif	Craig Young	Patrick Lang
Jay Ridgewell	Steve Tims	Ilya Shadrivov	Mykhaylo Lysevych	Alex Shanahan	Daniel Temp
Julie Arnold				John Bockwinkel	David Anders

# RSPE Guide To Safety

## Incident and Injury Management

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### Incident Management

An **incident** is defined as a dangerous occurrence that *did* occur and could have caused death, injury, or harm.

A **hazard** is defined as anything which has the *potential* to cause harm or injury.

An **illness** is defined as anything that adversely affects or aggravates a persons health whilst at work, or during a work endorsed activity.

A **near miss** is defined as an unplanned event that has the potential to cause, but does not actually result in, human injury, environmental or equipment damage, or an interruption to normal operation.

All must be reported to you supervisor and recorded on [Figtree](#) **as soon as possible after the event**. Figtree is accessible to all staff and students with a U identification number. If you are not a member of staff or a student, then please speak with your supervisor or the WHS team at [ohs.rspe@anu.edu.au](mailto:ohs.rspe@anu.edu.au)

**If a serious injury, or incident has occurred, the site must be preserved until a Government inspector from Comcare or the ANU WHS office advises otherwise.**

These reports are used by WHS staff to identify the causes of and provide solutions to hazardous situations. This information assists with the ongoing safety of all staff and students and is used to prevent further incident or injury. The incident management procedure can be found [here](#).

### Injury Management

ANU is now a self-insured university. As such, all workers compensation or related claims are managed by ANU. If you are injured whilst in the workplace or during a work endorsed activity, you may be eligible for compensation.

#### Staff

If you are a member of staff, you may be eligible to receive [workers compensation](#) for any injury incurred during working hours.

You will need to contact the WHS team for further information and to begin the workers compensation process. An [Early Intervention Assistance program](#) is also available if deemed appropriate.

You will be required to record the incident via [FigTree](#). If for any reason the injured is unable to submit the report, the supervisor or WHS team can submit it on their behalf.

#### Students

If you are a student and are injured at ANU, there are several resources available to assist you.

Students may be eligible for a Personal Injury Claim, and if you are an overseas student, you may already be covered under that insurance.

In the first instance, please speak with the WHS team should any injury occur for further assistance and information.

The incident needs to be recorded on [FigTree](#). If for any reason the injured is unable to submit the report, the supervisor or WHS team can submit it on their behalf.

# RSPE Guide To Safety

## Risk Management

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### Risk Management

Risk management is the management of risks within the workplace.

Risk assessments are vital to ensuring the safety of the workplace. They are to be conducted *prior* to beginning any activity that could result in injury, damage or harm to oneself, others, the environment, or to the building and equipment. Activities conducted in laboratories and workshops must have a risk assessment.

RSPHys has an extensive range of work activities that bring with them unique and complex hazards and hazardous environments.

Before any staff member or student can conduct a risk assessment, they must complete the ANU WHS Risk Management Training module. This is a mandatory requirement and can be found on the ANU Pulse Online Staff Training.

For all related Risk Assessment forms and templates and further information on risk management, please follow the link to the RSPHys WHS share point:

[RSPHys Risk Management](#)

ANU's risk management procedure can be found [here](#).

ANU's risk assessment templates can be found [here](#) (Appendix B).

#### 5 steps to conducting a risk assessment

##### 1. Identify the hazards

A hazard is something that has the *potential* to cause harm. the risk is what the likelihood is that this could occur.

Look around the area and identify what hazards are there. Now consider what additional hazards may be presented when conducting the activity.

##### 2. Consider who might be harmed and how

Once the hazards have been identified, think about who or what could be harmed, and how. Members of the public? Other workers? Equipment? the Environment? These are all considerations that must be made.

##### 3. Evaluate the risks and decide on control measures

After identifying the hazards and who / what could be harmed, consider how to ensure that that harm does not occur. This may involve removing the hazard altogether if possible.

The hierarchy of controls is on Table 4 of ANU's [risk assessment template](#) (Appendix B).

##### 4. Record your findings

It's important to document and record your findings, as this is a legal requirement. The recordings show the hazards identified and how they are controlled, and should the activity be repeated, this assessment can be reused.

##### 5. Review the assessment and update when needed

Workplaces change all the time, so it's important to remember to update and review the assessment prior to conducting the activity. This is an important step as you can add on new hazards within the area, or remove hazards.

When in doubt, seek assistance from your supervisor in the first instance, and then the WHS team.

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## Electrical Safety

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The ANU has an [electrical safety management](#) procedure that must be followed and places considerable onus upon individual responsibility. You should in your own interests familiarise yourself with the ANU policy and the ANU brochure '[Be safe with Electricity](#)'

### Safety Inspection Test and Tag

*Do not* use equipment that does not have a current safety test tag attached to it.

All equipment that is capable of being connected to the electricity supply must be inspected for electrical safety, and tagged, prior to it being connected to the mains supply. Note smaller plug-in devices such as phone chargers, USB chargers, laptop chargers also require testing and tagging.

Test and tag of equipment can only out by an approved person. The School's Electronics Unit can assist with testing up to five pieces of equipment at a time. To log a job request contact the Electronics unit [here](#).

Bulk testing of departments/areas is undertaken by an ANU electrical test & tag officer. To book his service log a job through the [building infrastructure work request system](#).

### Equipment constructed or modified in-house

Items that are constructed or modified are required to undergo a '**Electrical Item Certification**' before use. This is undertaken by an approved electrical person, and the School's Electronics Unit (EU) staff will assist you. This [form](#) must be completed by the EU prior to use.

### Danger Do Not Operate label

A danger label or tag is fixed to equipment that is damaged, requires maintenance, servicing, or has moving parts that may be a danger. If you find equipment that needs repair bring it to the attention of your supervisor and electrical personnel. It is an offence to tamper with tags or use equipment before it is rectified. Full details of this procedure are located [here](#).

### Electrical Appliances

The normal electricity supply in Canberra is 240 volts AC, 50 Hz. Note that some overseas wiring codes differ to our standards. All appliances or equipment must be inspected and tagged prior to use.

a. Power boards, Extension cords, double adaptors:

"Home made" powerboards are not permitted in Australia. Only commercially available powerboards are to be used. **Extension cords** should only be used as a temporary solution and are not to be installed as fixed wiring, unless fixed above floor level. Double adaptors or similar are NOT to be used in the ANU as they have no overload protection.

b. Battery chargers:

For rechargeable batteries, use the appropriate charger for the battery type. If a rechargeable battery is overcharged, it has a risk of overheating, smoldering, emitting hazardous fumes, fire or explosion.

c. Privately owned electrical equipment

The use of privately-owned electrical equipment is discouraged. Any non-ANU owned electrical equipment must be tested and tagged before being used on site at RSPE. Contact your local technical staff or administrator for more information.

d. Personal Heaters

The buildings within the School are heated and the use of personal heaters is not permitted. In particular electric radiator (bar) heaters or any fan heater without tip-over cut-off feature are a potential safety hazard. If you have a problem with the temperature in your area, please discuss with the Maintenance team.

### Building wiring installation

Any changes, additions or repairs to the electrical wiring of the buildings are not permitted except those undertaken by an approved A-grade licensed electrician.



# **RSPE Guide To Safety**

## **Electrical Safety**

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If you need electrical work done urgently contact the Maintenance team.

# RSPE Guide To Safety

## Electrical Safety

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### Research apparatus and Power cut considerations

In the event of an unexpected mains power cut or failure, issues can arise that research areas might not have anticipated. Consider the following possibilities when conducting a risk assessment.

The example below summarises some items that can be affected. This list is to alert staff to risk factors they need to consider when installing / upgrading / modifying control systems.

**Experimental apparatus** can have 3 main control systems:

- **Electrical switching of solenoid valves on or off (gas inlets, pumps)**
- **Compressed-air switching of solenoid valves**
- **Thermal control (via water pump circulation / cooling air circulation / sensors)**

All the above rely on electricity at some point in the process to operate, and if a power cut occurs issues can arise. The worst case is when power is OFF for an extended period, or outside work hours / late at night.

**Items to consider in event of a power cut:**

### Lighting

- No lights. Emergency lighting is temporary with batteries lasting approx. 2-3 hrs till total darkness in the area / laboratory.
- Street lights might not be affected, but building and car parks can be.

### Laboratory services

- **School compressed air** is off (although the accumulator tank should have pressure for a period).
- **Computers and diagnostics** are off.
- **Uninterruptable Power Supplies (UPS)** - Gives a short period of time on batteries to enable the area to manually turn equipment off. The ultimate purpose is to enable an orderly shutdown that won't put experimental equipment at risk. A UPS is not to run the equipment indefinitely.
- **Communication issues - IP phones** have battery backup for around 30 minutes and after that might not work. Copper network phones still exist at the emergency panels, RSPE L3 and NP control room.
- **Fume cupboards** no longer vent. Note: They do not restart automatically, so fume cupboards are required to be manually switched ON by the area.
- **Sample storage** risk is fridges are off, freezer can defrost with water on lab floor.
- **Vacuum pump** venting

### Thermal control

Water circulation pumps and temp controlled baths stop.

No laboratory air circulation, device cooling fans, Lab temperature change, sensors no longer work.

# RSPE Guide To Safety

## Hazardous Substances (Chemicals and Gases)

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All dangerous goods, chemicals or other hazardous materials, or significant changes in laboratory work practices, must be formally approved by the Head of Department/Laboratory Supervisor. A risk assessment must be conducted and documented. This risk assessment **must** be available in the Laboratory.

All areas are required to keep and maintain detailed inventories of hazardous materials, including research substances. Dangerous Goods that exceed manifest quantities are notified to COMCARE.

The [ANU Chemical Management procedure](#) outlines chemical related process in more detail.

The ANU has also developed a [Chemical Management Handbook](#) that provides more in-depth information.

***It is a requirement that all staff and students who handle hazardous chemicals attend the ANU WHS training course on Chemical Safety and also the Corrosives course.***

### ChemWatch

[Chemwatch](#) is an online database of all chemicals used within the University. It is accessible to all personnel and is a way to check what chemicals are in the room.

All chemicals have a **Safety Data Sheet (SDS)** (formerly MSDS) and it is essential you consult these prior to the introduction of a new chemical into your working practice to ensure adequate provision is made for its safe use. SDS' to all chemicals used in the room must be accessible quickly and easily, either by computer or by paper copy. Note that paper copies should be reviewed to ensure it is up to date. SDS' expire after five years.

### General guidelines for working with hazardous materials

- Complete an induction into the area with the lab owner / or supervisor so you are aware of the hazards in the area and where you can find necessary items, e.g first aid kit, spill kits etc.
- Complete the chemical safety training, and any other relevant trainings. The training matrix can be found [here](#).
- Prepare or consult a [risk assessment](#) (Appendix B) prior to beginning the activity involving the hazardous materials.
- Check the equipment being used is in good condition, e.g no cracks in beakers, and if necessary, that any test and tags are current on the electrical equipment being used.
- Do not eat or drink in a laboratory. Food should not be stored in any laboratory and any food present in a laboratory should be deemed contaminated and disposed of immediately.
- Appropriate clothing and footwear must be worn, e.g enclosed flat shoes and lab coat.
- Follow the standard operating procedures and always handle hazardous substances with care.

**Labels on containers:** All chemicals should be stored in a suitable, uniquely identifiable container labeled with the following information: (Reference [ANU Chemical Management Handbook](#))

- This material belongs to: Your name.
- Date of preparation:
- Substance Name: (Full shipping name NOT abbreviations)
- Chemical composition:
- Dangerous Goods Class / GHS pictogram information:
- Special Precaution:

Dangerous goods of different classes should **NOT** be stored together. (i.e. keep Flammables and Corrosives separate).

**Only minimal quantities of flammable liquids should be kept in laboratories/workshops.**

No more than six Winchester of flammable liquids are permitted within a room, unless stored in an approved flammable liquids cabinet. Containers that are larger than 5 litres are not permitted. For rooms smaller than 15m<sup>2</sup> the requirements are for less than the above.

**Sharps containers** and bagged items like contaminated gloves and wipes for incineration can be placed in the **yellow hazardous waste bin** near Stores. No chemical or radioactive items are to be

# RSPE Guide To Safety

## Hazardous Substances (Chemicals and Gases)

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placed in this bin.

### **Hazardous Waste Disposal - Additional Guidelines for RSPHys**

Each Department or Unit that creates chemical waste should have a designated contact person to organise routine waste disposal, to prepare a manifest of items and to organise a quote with a hazardous waste contractor (such as Toxfree, Sterihealth) ahead of disposal.

### **Chemical Waste Disposal**

Any chemical waste generated in RSPHys must be placed in a appropriate waste container, be labeled correctly, and be disposed of through a certified waste contractor.

The ANU's hazardous waste contractor is ToxFree and they visit the ANU fortnightly. The disposal manifest receipt issued by the contractor should be kept in the Department for 10 years.

**No chemicals are to be disposed of down the sink (unless neutralised)**

### **Procedure for the Disposal of Halogenated and Non-Halogenated Solvent Waste**

Halogenated and Non-Halogenated Solvent Waste (ie Dangerous Goods Class 3) can be temporarily deposited by the departments designated contact person in the RSPHys Main Flammable Liquids Store.

Please note the following:

- No decanting of waste material is permitted in this area
- Only waste containers that are complete for collection by a waste contractor can be deposited here.
- All waste containers must be labelled in accordance with the [ANU Chemical Management Handbook](#).
- RSPE Stores Staff need to be consulted when depositing waste containers in this storage area.

### **Fume Cupboards**

The general use, cleaning and chemical storage is the responsibility of the Department or area that utilises the cupboard. Listed below are some general house keeping rules. Local areas must have risk assessments, and safe operating procedures for all processes being undertaken in the cupboards.

- Cleanliness is essential for the correct operation of the fume cupboard system, all spills must be cleaned up thoroughly and all chemicals returned to the correct place after use. All equipment used must be cleaned and returned to the same condition it was upon your arrival. Glassware should be cleaned, rinsed and left to dry.
- The cupboards under a fume cupboard are NOT for long term or bulk storage. Containers of chemicals required on a weekly or daily basis are permissible; less frequently used chemicals should be kept in a bulk storage area.
- Fume cupboard should only be used for their designed purpose.
- A log book of fume cupboard use should be maintained by each area.
- Unidentified substances should be disposed of immediately. This requirement applies to both the fume hood and any associated cupboards. Beakers left unattended within a fume hood MUST be labeled as above.
- In the case of a single fume hood being used for both acids and solvents it is advisable to have a notice, in plain view, stating which of the two is presently in use. The fume hood should be emptied of all chemical containers and cleaned thoroughly prior to the change from acid to solvent, or vice versa. This is essential given the, usually, explosive reaction between solvents and acids.

Please speak to your supervisor or local technical officer for information on the safe use and local protocols and safety procedures.

# RSPE Guide To Safety

## Hazardous Substances (Chemicals and Gases)

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The maintenance, testing and repair of the fume cupboard is arranged and funded through School Facilities and Services. Any faults or repairs needed should be logged through the School Services website. For urgent faults please contact the Maintenance team.

The University is required, by the relevant Australian Standard, to have all fume cupboards tested and certified every six months. This certification is obtained via an external contractor. To assist with the timely repair and to minimise down time, ANU Facilities and Services will be performing an inspection just prior to the certification date.

School Facilities and Services will be maintaining records of all repairs and tests for the cupboards, and is developing a database of service and instruction manuals.

### Cryogenics

**Nobody is allowed to handle or use cryogenics until the appropriate induction, training and instruction have been provided by an authorised person.**

Cryogenics include liquid nitrogen and helium refrigerated liquid (Dangerous Goods Class 2 - Non flammable, non toxic)

**It is mandatory that all users who use cryogenics undertake the ANU Cryogenics Safety course, and liquid nitrogen course.**

A number of Departments in the School use Cryogenic Liquids in experimental programs. These liquids pose a number of potential risks both from cold burns and/or asphyxiation.

Risk warning - There is a major hazard from explosion if cryogenic liquids are heated while under confinement, this can even occur at room temperature. So all decanted liquids held in containers must be breathable/vented to prevent pressure building up.

#### **WARNING - USE OF LIFTS**

People must **not** travel in a lift with cryogenic liquid containers or dewars. Serious risk of cold burns and asphyxiation exists if container insulation is damaged or the lift breaks down. If you need to transport it, leave it in the lift and affix a sign on the lift door so others know hazardous substances are being transported and that they shouldn't get in.

**Never leave 'filling' Dewar's, Cylinders or Flasks unattended.** If in any doubt, seek advice from other "authorised operators" about decanting.

Please speak to your supervisor or technical officer for information on the safe use and safety procedures.

### Gases

The [Chemical Management Handbook](#) provides information in the use and handling of gases at the ANU.

All new gas installations must have the cylinders located outside the building and the gas piped inside. For flammable and toxic gases, the system must be approved by the ANU WHS Branch.

It's preferable to purchase gas cylinders through an Australian supplier (BOC, Coregas) as cylinders can be returned. Speciality gas purchases from overseas can result in very expensive disposal costs.

The following are general guidelines: -

- Always securely fasten cylinders. A falling cylinder could break a person's limb or the cylinder valve, liberating the contents. Under such circumstances the cylinder could become a projectile and take off like a rocket.
- Do not leave cylinders in direct sunlight or hot areas, as the heat could raise the pressure in the cylinder above safe levels
- All cylinders must be labelled, even if empty
- All cylinders must be logged into [ChemWatch](#)
- All cylinders should be shut off at the cylinder when not in use. Do not rely on regulators
- Ensure fittings are clean and serviceable before attaching

# RSPE Guide To Safety

## Radiation & Laser Safety

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For further information on policies and documents, including laser disposal, please follow the link below to the RSPHys WHS SharePoint: [RSPHys Radiation and Laser Safety](#).

### Ionising and Non-Ionising Radiation

**ANU procedure:** [https://policies.anu.edu.au/ppi/document/ANUP\\_000682](https://policies.anu.edu.au/ppi/document/ANUP_000682)

For advice on safety procedures contact the relevant safety officer in your department or the School's Radiation Safety Officer. Certain areas have restricted access due to ionising radiation hazards. These areas are appropriately labelled and warning notices **MUST** be heeded.

The radiation safety procedure can be found [here](#).

It is **mandatory** for any person dealing with radiation to complete the ANU Radiation Safety course. It is essential that you inform the local radiation safety officer when any new equipment, source etc is to be purchased or relocated. Be aware that there are legal requirements that must be adhered to. These are administered by the Australian Radiation Protection and Nuclear Safety Agency (**ARPANSA**). Your local [Radiation Safety Officer](#) can help with this.

When disposing of any ionising or non-ionising radiation sources, this **MUST** be organised in consultation with the [Radiation Safety Officer](#).

### Laser Safety

RSPE acknowledges that lasers are important to research and has several sources on site. Any person working with a laser **must** complete the laser safety training course prior to beginning work.

To purchase or dispose of a laser, speak with the [Laser Safety Officer](#).

#### Before use:

- Complete the Laser Safety Training Course
- Undertake an ophthalmic examination, this is a part of health monitoring and is to ensure that work with lasers will not adversely affect you - this can be organised by contacting the department admin
- Complete a risk assessment of the activity and obtain approval from the supervisor.
- Ensure the area is safe prior to use. If it is found that users are not wearing appropriate PPE, or is failing to comply with safety regulations, then RSPE maintains the right to lock down a space until further improvements are in place.

The following standards can be accessible via the [WHS main page](#):-

AS/NZS 2211.1:2004 : Safety of laser products - Part 1: Equipment classification, requirements and user's guide.

AS/NZS 2211.10:2004 : Safety of laser products - Application guidelines and explanatory notes to AS/NZS 2211.1

### Laser Pointers

Laser pointers are commercially available as Class I, II or III lasers. Laser pointers shall not exceed Class II for demonstration, display or entertainment in unsupervised areas, should be handled with respect and the beam should never be intentionally aimed at people. More information can be found in the [Radiation Safety procedure](#).

# RSPE Guide To Safety

## Workshop Safety

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All staff using machine tools etc are to undertake the ANU Workshop and Trade Safety Course (WHHR32)

**Only staff that are suitably trained and qualified are allowed to operate machinery and powered tools.**

All research, teaching and operational work in workshops shall be undertaken (as a minimum) in accordance with requirements and guidelines documented in the University's Workshop Safety manual.

No out-of-hours work is to be conducted in the workshops without another person being present, nor is any high risk activity to be conducted out of hours.

A risk assessment must first be undertaken for work requiring the use of machine tools or hand tools.

### **SAFE TOOL USE guideline**

When using hand or machine tools, basic safety precautions should always be followed to reduce the risk of personal injury and damage to equipment.

### **Read Instructions for Safety Warnings and Precautions**

1. **Keep work area clean.** Cluttered areas invite injuries. Do not use tools in damp, wet or poorly lit locations. Don't expose to rain. Keep work area well lit.
2. **Follow the safe work procedure.** Failure to follow safe instruction may lead to severe injury or damage. No work should begin without a safe work procedure in place.
3. **Use the right tool, for the right job.** Do not use a tool for a purpose for which it was not intended.
4. **Do not force the tool.** It will do the job better and more safely at the rate for which it was intended. Do not exceed the tool's capacities.
5. **Use eye protection.** Always wear approved impact safety goggles.
6. **Dress appropriately.** Always wear appropriate work clothing. Do not wear loose clothing or jewellery, as they can be caught in moving parts. Non-skid footwear is recommended. Wear restrictive hair covering to contain long hair.
7. **Do not overreach.** Keep proper footing and balance at all times. Do not reach over or across running machines.
8. **Store away idle equipment.** When not in use, tools should be locked up in a dry location to inhibit rust.
9. **Maintain tools with care.** Keep tools maintained and clean for better and safer performance.

# RSPE Guide To Safety

## Laboratory Safety

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There are often times when a laboratory is shared with others who may not all be working on the same project. To assist in safe practices, below is a general guide

Please note:

- If you must work after hours, always advise your supervisor what you're planning to do and where you will be. As a general rule *do not* work alone in the lab
- No high risk activities may be conducted out of hours.

### Communication

- Communicate not only within your team, but also others around you (if shared) especially about any out of the ordinary smells, or malfunction in equipment
- If you leave a piece of equipment running, *always* label it, so others know that an experiment is in progress. Include your name, date and contact details.
- Note any changes in room temperature, as this can affect experiments or chemicals.

### Signs and labels

- All signs and labels must be written in English
- Respect the signs and labels placed by other users, if in doubt, ask.
- All containers with chemicals *must* be labelled with a GHS compliant label, this includes commercial containers, decanted chemicals, samples and waste
- All bottles and beakers with substances *must* be labelled with what the substance is

### Cross contamination

Cross contamination in a lab can alter results of an experiment, or cause chemicals to react negatively which could affect yourself, or those around you.

- Food and drink is strictly prohibited in the lab
- Long hair should be tied back
- Users must clean equipment after every use - including beakers, stirrers, pipettes, scales and hotplates
- The space must be cleaned and sanitised after use
- Clean any spills immediately or report it to your supervisor if the spill requires a trained person, if the circumstance requires, evacuate the area
- Wash hands after work

### Personal Protective Equipment (PPE)

PPE is clothing or equipment that is worn to help protect someone from injury or illness. The school provides PPE, however for hygienic purposes, it's recommended that people bring their own safety glasses. If not, it's recommended that glasses are cleaned prior to use.

- PPE is to be worn in any lab or workshop area
- Consider keeping long pants with you during hot days
- Lab coats must be washed regularly
  
- PPE should not be worn outside the lab area, e.g gloves should not be worn to open doors, this could contaminate other areas.
- Ensure gloves are appropriate for the work undertaken
- Change gloves often, or when contaminated
- When using a mask, consider if others around you may need one too
- Contact lenses are not recommended when working with chemicals



# RSPE Guide To Safety

## Wellbeing

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RSPE understands the importance of wellbeing, and promotes a work/life balance and encourages personnel to participate in activities run by the College or University.

ANU offers staff and students a wide variety of services to assist with [wellbeing](#) practices. The Employee Assistance Program (EAP) and ANU Counselling is a free service that is accessible to all staff and students.

There are also several sessions and workshops organised throughout the year related to wellbeing, for more information, click [here](#).

E-bulletins are also distributed quarterly by the Work Environment Group and all bulletins can be found [here](#).

For further information, check out the [Wellbeing](#) page on the ANU website.

# RSPE Guide To Safety

## RSPHys Chemical Purchasing

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As part of the improvements to WHS across the University, RSPHys has a process on purchasing, storing and the use of chemicals in the Research School. Please read the section on Chemical Safety on the RSPHys SharePoint for further chemical safety protocols:

[RSPHys Chemical Safety & CMS](#)

### Purchase of new chemicals

Information and documents on Chemical Purchasing can be found on the RSPHys WHS Sharepoint.

[Chemical Purchasing](#)

- All new chemicals are to have a fully completed Hazardous Chemicals Purchasing Form attached to the purchase request. The form can be found here: [RSPHys Chemical Purchasing Form](#)
- A Risk Assessment (3.03.01-01) ([RSPHys Risk Assessment](#)) must be completed before purchase.
- **For all processes that have a residual risk level of High - approval for use must be granted by the Director or above.**
- Enter the details of the chemical and ensure the correct Safety Data Sheet (SDS) into ChemWatch. The SDS must be in an Australian Standard format and from the actual manufacturer – other SDS are not acceptable.
- Please forward your completed Hazardous Chemicals Purchasing Form and purchase request to [purchasing.physics@anu.edu.au](mailto:purchasing.physics@anu.edu.au) for processing.
- Please forward completed risk assessment and safe work procedure forms to [whs.physics@anu.edu.au](mailto:whs.physics@anu.edu.au) for collation and record keeping.
- Ensure a copy of the Risk Assessment and Safe Work Procedure is available for all staff and students using the laboratory.

### Purchase of replacement chemicals (restocking)

All replacement chemicals are to have a fully completed Hazardous Chemicals Purchasing Form attached to the purchase request – for the first request only.

Check and update the following as required:

- The attached Risk Assessment (3.03.01-01) and Safe Work Procedures (3.03.01-04) must be completed and reviewed by the supervisor/HOD before any work is undertaken. Risk Assessment and SWP's should be reviewed annually.
- **For all processes that have a residual risk level of High - approval must be granted by the Director or above.**
- Ensure the details of the chemical and the correct Safety Data Sheet (SDS) into ChemWatch. The SDS must be in an Australian Standard format and from the actual manufacturer – other SDS are not acceptable.
- Please forward completed forms to [whs.physics@anu.edu.au](mailto:whs.physics@anu.edu.au) for collation and record keeping. If the forms don't require updating please ensure that a copy of the current forms are forwarded as well.
- Ensure a copy of the Risk Assessment and Safe Work Procedure is available for all staff and students using the laboratory.

### Store staff purchasing steps

1. Need to have a completed Hazardous Chemicals Purchasing Form with the purchase request. If this form is completed, then confirmation regarding purchase is not required from RSPHys WHS staff. If there are any queries, please contact the end user/supervisor in the first instance, then RSPHys WHS staff.
2. Need to confirm that the chemical is listed in ChemWatch in the correct quantity and location. Double checking sections C & D in the form.

It is not necessary for you to sight the General Hazard Management Form or Safe Work Procedures.

# RSPE Guide To Safety

## RSPHys Chemical Purchasing

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E

Ensure that Section E is completed with “YES” to Q 8 to 11, including details for storage (to assist with Chemwatch).

1. Please forward completed forms to [whs.physics@anu.edu.au](mailto:whs.physics@anu.edu.au) once you have sited them.
2. Process the purchase request.

# RSPE Guide To Safety

## Laboratory WHS Risk Assessment

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### LABORATORY WHS RISK ASSESSMENT

It is University policy that the School and all its staff have the responsibility to ensure that work conditions are safe and present minimal risks to health. The following is a short evaluation proforma to assist in health and safety awareness for new (and existing) procedures/experiments. This evaluation should be performed by the supervisor or delegated person in charge of the work area.

Location of experiment/Procedure -

\_\_\_\_\_  
Experimenter/Technician

#### 1. Hazard Identification

What hazards are associated with the work?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Checked literature. e.g. Safety Data Sheets, for information about the properties and hazards of new (unfamiliar) materials and equipment to be used in new and existing procedures.

\_\_\_\_\_  
\_\_\_\_\_

Consult relevant persons regarding proper handling procedures and work practices.

- Supervisor, senior staff and area safety officers
- ANU WHS Unit
- Area First Aid Officers

Check recommended safe work practices, as detailed in local, school, ANU and Australian Standard document.

#### 2. Risk Assessment

Undertake a risk assessment of each identified hazard. Where possible quantify the probable level of exposure to the hazard and assess their potential as a

Safety Hazard

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Health Hazard

# **RSPE Guide To Safety**

## **Laboratory WHS Risk Assessment**

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# RSPE Guide To Safety

## Laboratory WHS Risk Assessment

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Note: Where quantification is not possible estimate according to four general levels of qualitative risk:

☛ high                      ☛ significant                      ☛ moderate                      ☛ low

### 3. Control the Risk

Having assessed the risk, controls need to be put in place to effectively reduce the risk as far as is reasonable practicable. These controls are to be explicitly written into the experiment/procedure protocol. Attach a signed copy of the written risk assessment to this protocol.

Some typical control options would be as follows -

Are all areas where serious potential hazards exist sign posted.

Are persons trained (tertiary, OHS Unit courses etc.) in the science and practice of the hazard.

Are procedures in place to be followed in case of a:

Chemical spill

Fire

Ionising Radiation Exposure/Contamination

Asphyxiation/electrocution

Accident (First Aid)

What appropriate protective equipment is available and ready to use.

List equipment available: \_\_\_\_\_

Note that detailed control recommendations for:

CHEMICAL

IONISING RADIATION

LASERS

BIOLOGICAL MATERIALS

are available in the University's training manuals for these materials and relevant Australian standards in the AS2243 series.

Person responsible for organising assistance in case of an accident:

\_\_\_\_\_

Has the appropriate school procedure/experiment proforma been completed.

Authorisation for procedure/experiment

\_\_\_\_\_ Date: \_\_\_\_\_

*(Head of Department/Laboratory Supervisor)*

cc. Head of Department, Head Technical Officer, RSPE WHS Committee Chair

# RSPE Guide To Safety

## Plant Risk Assessment and Management Summary

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The University is required to establish systems to effectively manage "plant" under its control. This is to minimise the risk to the health and safety of staff, students, contractors, and other people at or near the University workplaces, as far as is reasonably practicable.

Departments need to review items of "plant" and complete new risk assessment forms. If areas have technical records or manuals for "plant" purchased over the years, this will assist the process.

Some examples of "plant" may include:

- Plant under pressure e.g. hydraulic press, pressure piping, steam turbines, sterilisers, gas cylinders
- Plant with moving parts e.g. presses, lathes, milling machine, mixer, slicer, microtomes, centrifuge
- Powered mobile Plant e.g. electric vehicles; vehicle hoists, delivery and construction zoning, forklift, cherry picker, tipper truck
- Plant with hot or cold parts e.g. liquid nitrogen tanks and dewars, hotplates, exhaust systems, apparatus with naked flame,
- Electrical plant and plant that is exposed to electrical hazards e.g. electrical generators, powered hand tools, computer equipment, photocopiers and fax machines
- Plant designed to lift or move e.g. cranes, forklifts, hoists and elevating work platforms; earth moving machinery
- Industrial robots and other remotely or automatically energised equipment
- Scaffolds
- Non-powered hand tools e.g. screwdriver, chisel, hammer etc. small office equipment
- Accessories such as jigs and fixtures
- Miscellaneous items - supporting experiments infrastructure e.g. vacuum pumps, chillers, refrigeration units

RSPE requires all existing 'Plant' to be risk category assessed under a 'A-B-C-D' system including equipment manufactured within the School. New plant obtained in the future will require this process to be completed as well as a Pre-Purchase Risk Assessment.

'Plant' in your area must be assessed and determined for RISK CATEGORY:

**A. Low risk**

**B. Medium risk**

**C. High risk**

**D. Extreme risk**

For risk categories **B, C, D** the ANU requires the completion of the Plant Risk Assessment & Management Summary (PRAMS) form.

To assist with background understanding and documentation for this risk assessment process, three files are attached:

Plant - Life Cycle Stages (pdf) [http://physics.anu.edu.au/OHS/\\_files/Plant - Life Cycle Stages.pdf](http://physics.anu.edu.au/OHS/_files/Plant - Life Cycle Stages.pdf)

RSPE - Risk Assessment Guidelines(pdf) [http://physics.anu.edu.au/OHS/\\_files/RSPE - Risk Assessment Guidelines.pdf](http://physics.anu.edu.au/OHS/_files/RSPE - Risk Assessment Guidelines.pdf)

RSPE - PLANT - PRAMS form (fill out this form for all plant assessed as B, C and D risk). (rtf) [http://physics.anu.edu.au/OHS/\\_files/RSPE - PLANT - PRAMS form.rtf](http://physics.anu.edu.au/OHS/_files/RSPE - PLANT - PRAMS form.rtf)

Once completed, these forms should be maintained by the Department, and made available for use by new staff and students, and OH&S staff if required.

# RSPE Guide To Safety

## Plant Pre-purchase Documentation

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The University is required to establish systems to effectively manage plant under its control to minimise the risk to health and safety of staff, students, contractors, and other people at or near University workplaces, as far as is reasonably practicable.

The School is implementing the requirement for items of Plant to have a Pre-Purchase Risk Assessment Checklist completed when submitting a purchase order.

In addition, the Department is responsible for maintaining records for all plant (including relevant tests, commissioning, inspection, and maintenance).

Attached is a Plant Pre-Purchase Risk Assessment and Checklist Form to be filled out. The form is supplied in rtf format for the option of easier form processing:

Plant - PRE Purchase Checklist Form [http://physics.anu.edu.au/OHS/\\_files/Plant - PRE Purchase Checklist Form.rtf](http://physics.anu.edu.au/OHS/_files/Plant - PRE Purchase Checklist Form.rtf)

or ANU [https://policies.anu.edu.au/ppl/download/ANUP\\_001065](https://policies.anu.edu.au/ppl/download/ANUP_001065)