



## LABORATORY SAFETY POLICY AND PROCEDURES

### OVERVIEW

As stated in the University's Occupational Health and Safety Policy, the University is committed to continuously improving the management and standards of Occupational Health and Safety. This extends to minimising the risks associated with access to, and use of, laboratories by restricting access to competent persons or to those who are supervised by them.

### DEFINITIONS

#### **Accountable Person:**

An individual, who assumes responsibility for the health or welfare of any other person in a workplace by providing instruction, direction, assistance, advice or service, is deemed an Accountable Person in accordance with the *Workplace Health and Safety Regulations 1998*. All management and supervisory staff (which includes those with responsibility for students) are therefore considered "Accountable Persons".

#### **Competent Person:**

A person with sufficient knowledge and skills acquired through qualifications, training or experience to perform the relevant task.

#### **Employee:**

For the purposes of this Policy, employee refers to any staff member, and to any student or visitor undertaking activities in a laboratory.

#### **Laboratory:**

A laboratory may be a place of specialised work, research, clinical or diagnostic evaluation, teaching and/or learning. Laboratories are commonly used in many scientific disciplines from chemistry, physics, botany and zoology to medicine, psychology, dentistry, chemical engineering, agriculture and veterinary science. The term laboratory may equate with workshops in engineering areas such as mechanical, electrical, aeronautical and civil engineering.

#### **Responsible Officer:**

Deans, Heads of Administrative Divisions, Heads of School and Sections have been designated as Responsible Officers under the *Workplace Health and Safety Act 1995*.

### RESPONSIBILITIES

#### **Accountable Persons:**

Determine which employees are deemed competent persons in accordance with this Policy. Ensure that employees who are undertaking activities in laboratories receive, or are instructed in the content of this Policy. Ensure that records are kept of all employee training and induction in relation to laboratory activities.

#### **Employees:**

Ensure that they undertake activities in laboratories in a manner which does not adversely affect their own health and safety, or that of others by following this Policy. Employees must disclose to the Accountable Person whether there is any condition, medical or other, that may

impact on their activities in a laboratory. They must report all hazards, incidents and accidents to the relevant Accountable Person.

#### **Responsible Officers:**

Ensure that where employees are undertaking activities in laboratories that this Policy is implemented.

### **BACKGROUND**

There is a significant level of risk associated with employees being given general access to laboratories if they are not sufficiently familiar with the correct operating procedures and safety requirements for laboratory machinery/equipment processes. This policy outlines the requirements for operating within University Laboratories and provides a Laboratory Safety Assessment Form, a Laboratory Risk Assessment Checklist and Sample Induction Training Attendance Form. This policy should be used in conjunction with all other relevant University Policies and Procedures available on the University's OH&S Website.

#### **Access to Laboratories**

Access to laboratories should be restricted to employees who have been trained and are proficient in the operations of the laboratory's machinery/equipment processes and who have a sound knowledge of the required safety procedures. Other employees wishing to undertake routine tasks in a laboratory, provided they are working under the supervision of a fully competent person are also permitted access to laboratories. Children are not permitted in University Laboratories.

#### **Accident/Incident**

All Accident/Incidents must be reported to the Accountable Person as soon as possible and an Accident/Incident Form completed and forwarded to the OH&S Unit.

#### **Conduct**

Practical jokes and unauthorised experiments are forbidden.

#### **Dress**

- Persons working in a laboratory must wear a laboratory coat unless identified as not required by a risk assessment
- Long hair should be tied back
- Employees are not permitted to enter laboratories without footwear.
- Suitable footwear that fully encloses the feet must be worn in laboratories at all times. Sandals or thongs are not permitted in laboratories at any time.

#### **General Laboratory Safety Rules**

Standard Operating Procedures, which include laboratory safety procedures or guidelines, specific to each laboratory must be readily available, understood and followed within the laboratories. Accountable Persons must ensure that employees are aware of hazardous waste disposal procedures eg. chemicals, liquids, biological waste, radioactive waste, sharps, broken glass etc. Laboratories must be inspected regularly using the University's Workplace Inspection Checklist or a checklist designed for the specific laboratory. The Workplace Inspection Checklist provides a comprehensive, but not necessarily exhaustive, list of items that need to be reviewed in laboratories and inspected on a regular basis, e.g. gas taps must be correctly labelled and pressure vessels must have current certificate of inspection.

#### **Laboratory Hazards**

Defined simply, a hazard is something which may cause injury or damage. The hazards encountered in a laboratory are many and varied. These hazards fall generally into one of five categories.

- **Biological** – pathogenic microorganisms, biological tissues, animals
- **Chemical** – corrosives, flammables, toxic
- **Physical** – noise, radiation, fatigue
- **Electrical/Mechanical** – high voltage apparatus, machinery with moving parts

- **Psychological** – emotional stress

A laboratory safety assessment should be conducted on a regular basis using Attachment 1.

### **Manual Handling**

An Accountable Person must take all reasonable steps to ensure workplace compliance with the National Standard for Manual Handling issued by Worksafe Australia. Employees should therefore be familiarised with the University's Manual Handling Policy prior to undertaking activities in laboratories.

### **Material Safety Data Sheets (M.S.D.S)**

Accountable Persons must ensure that Material Safety Data Sheets are available to all employees in laboratories prior to their use of substances/materials.

### **Medical/Other Conditions**

Employees are required to disclose any medical or other condition which may affect their safe use of machinery/equipment within laboratories. Full disclosure of medication or substances which may adversely affect the safe use of equipment is also required prior to participation in laboratory activities. For students, this is not required if a competent person demonstrates the laboratory procedures or if the laboratory session does not involve the use of laboratory machinery/equipment.

### **Mouth Pipetting**

Mouth pipetting of any substances is prohibited at all times in all laboratories.

### **Personal Habits**

Smoking in laboratories is not permitted

The storage and consumption of food and drink is not permitted in laboratories at any time.

### **Personal Protective Equipment**

Accountable Persons must ensure that employees use personal protective equipment (PPE) where appropriate. The University has a Personal Protective Equipment Policy which should be considered when determining appropriate PPE.

### **Risk Assessment**

An Accountable Person is responsible for undertaking a risk assessment for all activities within a laboratory in accordance with Section 17, 18 and 19 of the *Workplace Health and Safety Regulations 1998*. Schedule 7, 8 and 9 of the *Workplace Health and Safety Regulations 1998* should also be reviewed when undertaking this task. The University's Project/Task Risk Assessment and Control Procedure can be utilised for these purposes. The risk assessments should be available to warn employees of laboratory hazards and how to avoid, eliminate or control these hazards. The Laboratory Risk Assessment Checklist (attachment 2) should be utilised for this purpose.

### **Safety Equipment**

Safety equipment must be identified for each laboratory by a risk assessment. The risk assessment should also determine if safety equipment such as safety showers and eyewash stations are required. A risk assessment should also be undertaken prior to the outfitting of any new laboratory or upgrade of an existing laboratory. (It is not suitable to fit safety showers and eyewash stations to every laboratory in the University as some laboratories are computer laboratories and other laboratories use equipment which increase the hazard if showers are installed e.g. Electrical Engineering laboratory). Laboratories should not be established in any existing facility until a full risk assessment is undertaken.

### **Training and Induction**

All employees must be inducted into each laboratory. A record of the induction training must be kept in each School/Section. Induction training must be undertaken and documented for each different laboratory (Attachment 3). Employees must be adequately trained in laboratory safety procedures. All activities undertaken in a laboratory should be performed by a competent person or supervised by a competent person. Prior to undertaking laboratory

activities all employees must receive sufficient training in terms of correct operating procedures and safety requirements for the safe use of laboratory machinery and equipment.

### **Waste Management**

Accountable Persons must ensure that employees are trained in waste management procedures to ensure that waste is segregated, labelled and stored in the correct manner.

The tipping of waste down the sink is prohibited unless the correct permissions are obtained from the relevant Regulatory Authorities. The use of the University contractor for waste management is recommended. Schools/Sections are to ensure compliance with the disposal of items such as aerosol cans, refrigerators, gas bottles, batteries etc, which have specific disposal considerations. This information is available from the local City Council.

### **REFERENCES**

The following legislative provisions have guided the development of this Policy:

- *Workplace Health and Safety Act 1995*
- *Workplace Health and Safety Regulations 1998*

### **FURTHER INFORMATION**

Further information relating to the Laboratory Safety Policy is available from the Occupational Health & Safety Unit on 62 26 7509.

Approved by OH&S Committee : 14<sup>th</sup> September, 2000.

### **Disclaimer**

This Policy was designed for use within the University of Tasmania. The University makes no guarantee and assumes no responsibility as to the absolute correctness for all circumstances or for the adaptation outside the University of Tasmania environment.

## Laboratory Safety Assessment Form

The laboratory supervisor should fill out this form. The answer to each question should be 'Yes'. If the answer is 'No', write a note in the comments section, review the situation and control the hazard.

Tick 'Yes' or 'No' for each item	Yes or No
All staff have received induction training prior to working in the laboratory.	
Copy of the Laboratory Safety Manual or safety guidelines is readily accessible.	
Material safety data sheets (MSDS) are readily accessible for all hazardous materials used or stored in the laboratory. All laboratory staff know the locations of the MSDS.	
Staff are aware of hazardous waste disposal procedures (chemicals, liquids, biological waste, radioactive waste, sharps, broken glass, etc).	
Incident/ Accident and Injury Report Forms are available.	
Regular safety inspections of the laboratory are conducted.	
Safe working practices are developed, and maintained at all times.	
Staff are warned about the hazards particular to the laboratory and know how to avoid, eliminate and/or minimise them.	
Procedures for safe handling and storage of dangerous goods such as flammable liquids, gas cylinders, poisons, corrosives, radiation, etc are observed.	
High standards of housekeeping are observed and maintained.	
Staff use the safety equipment and personal protective clothing provided, in the correct manner.	
Staff know what to do in case of emergency, fire, explosion, chemical spill, etc.	
Staff are advised on correct manual handling techniques (such as safe lifting, pushing, pulling and carrying procedures). Manual handling aids are provided and used, as required.	
First aid officers are available and staff know the location of first aid cabinet(s).	
Laminar flow and biosafety cabinets are certified annually.	

### Comments

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

Position: \_\_\_\_\_ Laboratory: \_\_\_\_\_

**Please copy this form to the Responsible Officer in your workplace**

<b>Laboratory Risk Assessment Checklist</b>		
<b>Action Taken</b>	<b>Yes</b>	<b>No</b>
All items in the laboratory have been identified and their location/use documented		
All hazards associated with the installation and initial start-up (where relevant), use, cleaning, maintenance, repair and alteration (where relevant) of laboratory machinery/equipment processes have been identified (including machine guarding/protection designed to prevent contact, entanglement or damage).		
The risks associated with each laboratory machinery/equipment processes hazard have been assessed		
A risk assessment conclusion has been reached about each hazard and the results recorded		
Relevant employees and Accountable Persons have been consulted on health and safety issues related to the installation and initial start-up (where relevant), use, cleaning, maintenance, repair and alteration (where relevant) of laboratory machinery/equipment processes in the workplace		
Appropriate risk control measures have been implemented as a first priority to eliminate risks from laboratory machinery/equipment processes hazards and, where this is not possible, to reduce these risks to an acceptable level		
Personal protective equipment and administrative controls are used only as a back-up to other controls, as interim measures or as a last resort for risk control		
The risk management processes for laboratory machinery/equipment processes hazards have been documented and the records are made available to employees		
A purchasing system is in place to vet the introduction of new laboratory machinery/equipment processes and ensure that no unnecessary risks are introduced into the workplace		
A system is in place to ensure that the risk management process is conducted for all new laboratory machinery/equipment processes introduced into the workplace and that this process is documented		
Risk control measures in place for laboratory machinery/equipment processes hazards are monitored to ensure that they are still working effectively		
Where risk control measures are found to be defective, these are reviewed and the defects rectified immediately		
All relevant employees and Accountable Persons receive appropriate information, instruction, training and supervision to ensure the safe installation and initial start-up (where relevant), use, cleaning, maintenance, repair and alteration (where relevant) of laboratory machinery/equipment processes in the workplace		
A system is in place to ensure that all accidents, incidents and near misses involving machinery/equipment processes are reported, investigated and recorded, and measures are taken to ensure that effective risk control measures are implemented		
Prior to dismantling and/or disposal of laboratory machinery/equipment processes, the risk management process is undertaken		
All hazards involved in the dismantling and/or disposal of laboratory machinery/equipment processes are documented and the associated risks assessed		
A conclusion is reached about the risks involved in the dismantling and/or disposal of laboratory machinery/equipment processes and appropriate control measures are implemented		
The risk conclusion together with the control measures for hazards involved in the dismantling and/or disposal of laboratory machinery/equipment processes, and the dates implemented, are documented		
Records of the risk management process are kept for the duration required by legislative requirements		





## LABORATORY MEDICAL DISCLOSURE FORM

The University is committed to continuously improving the management and standards of occupational health and safety within our workplaces and in so doing we strive to protect the health and safety of our employees, students, contractors and visitors.

In order to meet our duty of care obligations all employees, students, contractors and visitors who intend to undertake activities in University Laboratories must complete the following questions prior to approval being granted to access laboratory areas. If in the course of your employment/study you become aware that your medical/other condition changes you must advise the Laboratory Supervisor/Course Co-coordinator immediately.

The University is committed to anti-discrimination practices in the workplace and will provide reasonable accommodation to allow individuals to participate in laboratory activities where it does not compromise safety requirements.

If you think that you may have a disability or other health condition, which needs to be taken into account in the organisation of laboratory activities, please see the Laboratory Supervisor/Course Co-coordinator or contact the University's Disability Adviser.

**To be completed by participant undertaking laboratories activities:**

<b>Full Name:</b>	<b>School/Section:</b>
<b>Date of Birth:</b>	<b>Course Name:</b>
<b>Contact Number:</b>	<b>Campus:</b>
<b>Student Number: or Employee Number:</b> _____ / _____	<b>Course Coordinator/Supervisor and Contact Number:</b>  <div style="text-align: right;">Ext. _____</div>

Are you aware of any medical condition or other condition that may affect your capacity to participate in laboratory activities?

Yes  No  Details (Optional) \_\_\_\_\_

Are you currently taking any medication or substances that may affect mental alertness and/or co-ordination (e.g. medication labelled with a warning sticker alerting the user not to drive a motor vehicle or operate machinery.)

Yes  No  Details (Optional) \_\_\_\_\_

Have you suffered seizures, fits, convulsions, epilepsy, blackouts, fainting, double vision, sleep disorders, sleep apnea or narcolepsy within the last 5 years?

Yes  No  Details (Optional) \_\_\_\_\_

**If you answered yes to any of the questions above, you must complete Attachment 5 and have your Medical Practitioner sign a declaration enabling you to participate in laboratory activities. Once complete, forward both forms, including the signed declaration to the Strategic HR Unit PRIOR to you participating in any laboratory activities. It should be noted that the Strategic HR Unit will hold all medical documentation confidentially and that employee medical data will not be disclosed to Schools/Sections without your consent. If you would like to discuss your condition or circumstances please contact the Strategic HR Unit on ext 7509 or ext 3275.**

***Personal Declaration:***

*I declare that I have read this form and that I have completed it to the best of my knowledge and ability, disclosing all relevant facts as they are known. I also undertake to advise my Supervisor/Course Co-coordinator should my circumstances change during my employment/study/contract that would change the answers provided above.*

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**



## Laboratory Medical Disclosure

The University of Tasmania requires medical fitness for duty. If a staff member, visitor or student is required to participate in laboratory activities medical fitness to do so is essential to enhance personal and public safety and to reduce potential loss to the University.

<b>Full Name:</b>	<b>School/Section:</b>
<b>Date of Birth:</b>	<b>Course Name:</b>
<b>Contact Number:</b>	<b>Campus:</b>
<b>Student Number: or Employee Number:</b> _____ / _____	<b>Course Coordinator/Supervisor &amp; Contact No:</b>  <b>Ext.</b> _____

**Condition:** \_\_\_\_\_

\_\_\_\_\_

**Medication:** \_\_\_\_\_

\_\_\_\_\_

**Additional Information:** \_\_\_\_\_

\_\_\_\_\_

## Doctor Certification

I, Dr \_\_\_\_\_ of \_\_\_\_\_  
(full name) (surgery name or address)

being the treating doctor of \_\_\_\_\_ declare them  
(patient name)

**medically fit / medically unfit**

to undertake all workshop/design studio activities given their disclosed condition.

Special Requirements (if any):   
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Signature: _____	Date: _____
Surgery Stamp:  	

For any queries please contact the Strategic Human Resources Unit on 6324 3275 or 6226 7509.

**Please forward completed form to: Strategic Human Resources, University of Tasmania  
Locked Bag 1309, Launceston TAS 7250**