

Health and Safety Procedure - Laboratory (Teaching) Safety

Section 1 - Background and Purpose

(1) Laboratories are facilities that provide controlled environments in which scientific or technological research, experiments, and measurement are performed. La Trobe University has a significant number of laboratories that support the core operations of teaching, learning and research. Examples of such facilities range from conventional chemical, anatomical, engineering and geomorphology laboratories to contemporary human movement, health monitoring, and information systems laboratories. The work undertaken can range from observational work that is carried out by undergraduate students to complex undertakings and lead innovation research.

(2) The purpose of this Procedure is to address the hazards and possible heightened risk associated with teaching activities, particularly in undergraduate teaching and learning laboratory facilities. Also to outline a risk management approach in planning and executing laboratory work with the intent of ensuing common standards and practices, including suitable personal protective equipment and adequate levels of supervision.

(3) This procedure aligns with Australian Standard AS2243.1:2005 Safety in Laboratories:

- a. Part 1: Planning and Operational Aspects
- b. Part 2: Chemical Aspects

Section 2 - Scope

(4) This Procedure applies to all teaching laboratories that are managed and operated by La Trobe University.

Section 3 - Policy Statement

(5) Refer to the University [Health and Safety Policy](#).

Section 4 - Procedures

Part A - Responsibilities

Heads of Department and Heads of School

(6) Heads of Department and Heads of School are responsible for:

- a. Providing oversight to ensure laboratory work is planned, risk assessed and safely conducted
- b. Confirming the acceptance of residual risk for completed risk assessments
- c. Ensuring adequate levels of supervision that is commensurate to the risk
- d. Seeking assurance that participants have completed all required inductions before laboratory activity

commences

- e. Seeking assurance that processes are in place to respond to incidents
- f. Leading incident investigation, ensure any recommendations are implemented and learnings shared
- g. Leading laboratory inspections and reviews to ensure these occur periodically for hazard management and continuous improvement

Teaching, Technical and Demonstrating Staff

(7) Teaching, Technical and Demonstrating Staff are responsible for:

- a. Ensuring that laboratory work is planned, risk assessed and safely conducted
- b. Seeking confirmation of residual risk acceptance from each risk assessment
- c. Ensuring risk controls are in place and operational
- d. Ensuring participants have completed all required inductions before laboratory work is commenced
- e. Ensuring personal protective equipment (PPE) and general clothing requirements are followed by participants
- f. Providing suitable levels of supervision for the laboratory activities that is commensurate to the risk
- g. Following processes to respond to incidents and emergencies
- h. Participating in incident investigation and share any learnings
- i. Supporting periodic laboratory inspections and reviews for hazard control and continuous improvement

Undergraduate Students

(8) Undergraduate Students are responsible for:

- a. Completing the mandatory safety induction to teaching laboratories before commencing activities
- b. Following the personal protective equipment (PPE) and general clothing requirements
- c. Following safe laboratory practises and processes
- d. Stopping the activity if there is immediate danger to health and safety
- e. Reporting all hazards and incidents to teaching and demonstrating staff

Health and Safety Team

(9) Health and Safety Team are responsible for:

- a. Providing oversight and monitor this procedure
- b. Advising on hazards and risk assessments as required
- c. Advising on risk control measures
- d. Supporting incident response, investigation and share the lessons learnt across the organisation

Part B - General

(10) Laboratory work will vary widely, presenting differing levels of hazard and risk with consideration to the type of activity undertaken. The following groupings are indicative categories to assist aligning the level of risk assessment, personal protective equipment (PPE) requirements and supervision that is required.

(11) Each school will undertake risk assessments to identify and address the differing types of Laboratory work to ensure simple activities adhere to basic requirements whilst complex undertakings are deeply considered and carefully planned for.

Low Risk Activity

(12) Observational laboratory work or theoretical modelling that is carried out by students for the purpose of teaching and learning and is of low risk to Health and Safety. Examples include health monitoring and computer modelling. In these instances, the laboratories used are typically dry facilities.

General Laboratory Activity

(13) Practical activities that are typically associated with laboratories such as experimental work using chemical substances and specialised equipment. Examples are typically wet laboratory activities that are designed for teaching and learning.

Heightened Risk Activity

(14) Activity which includes hazardous substances, biological models and complex equipment that poses heightened risk due to the inherent risk or because the combination that is being utilised. Risk assessments will identify activities which have heightened associated risk. In these instances, Physical Containment (PC) laboratories are frequently utilised as a control measure to address heightened risk.

Part C - Risk Assessment

(15) The function of risk assessments is to raise awareness of the hazards and quantify the risk. This process enables a review of the controls in place relative to the risk and promotes the consideration of additional controls to improve hazard management. The residual risk rating will realistically reflect the remaining risk to ensure that the line of sight to the hazard/s is not lost nor diminished.

Part D - Laboratory Safety Induction

(16) In addition to the general Health & Safety induction that all staff and students complete as part of the onboarding process, a laboratory safety induction will be completed for general laboratory work and include practical skills induction for specific equipment or techniques that will be utilised.

(17) Each school will develop a range of inductions to capture the differing requirements of undergraduate, post graduate and research requirements relative to the laboratories under their management and the level of risk.

Part E - Personal Protective Equipment (PPE)

(18) The selection of personal protective equipment (PPE) will be guided by the type of laboratory activity under consideration and in consideration of the hazards and risks involved.

(19) As a minimal requirement, all staff and students participating in general laboratory activity will wear enclosed footwear.

(20) Where activities include the use of mechanised equipment, heat source or naked flame, flowing garments such as headscarves and gowns, constructed from non-flammable material will be tucked in whilst long hair will be tied back.

(21) In wet laboratories, participants will ensure legs are protected by clothing and lab coats are correctly worn.

(22) Risk assessment and the type of facility used will identify additional requirements for PPE such as eye protection, hearing protection, gloves, face masks, hair nets, disposable coats or suits and shoe covers.

Part F - Laboratory Supervision

(23) All laboratory work undertaken for teaching purposes will be supervised by staff. The levels of supervision will be commensurate to the risks as determined by the activity risk assessment.

Part G - Working Alone or Outside Operational Hours

(24) There are occasional circumstances where participants may need to work alone or outside normal operational hours to complete laboratory activity. In these instances the consequential risk of some hazards may increase, as immediate assistance in the event of an incident is reduced.

(25) Where the activity risk assessment identifies that the planned activity has moderate or heightened risk, then the activity will not proceed without the adequate supervision from staff.

(26) The following are examples of activities that will not be undertaken alone or without adequate supervision for the purposes of teaching and learning:

- a. Operating equipment or machinery that is capable of inflicting serious injury
- b. Using apparatus that could result in the release of high energy or significant levels of toxic or environmentally damaging hazardous material
- c. Working with toxic or corrosive substances where there is a significant risk of exposure
- d. Handling venomous biological specimens
- e. Working with large animals, other than feeding or observation
- f. Working with microorganisms of Risk Group 3 or higher or work that requires the use of a Containment level 3 facility
- g. Working with exposed energised or electrical systems
- h. Operating lasers of Class 3 and above
- i. Working with radionuclides that requiring adherence to the National Radiation Laboratory code
- j. Working in environments, below or above atmospheric pressure and where there is a risk of low oxygen or a toxic atmosphere
- k. oxygen or a toxic atmosphere

Part H - Immunisation

(27) Specific immunisation is essential before commencing laboratory work that involves a heightened risk of infection. The possibility and type of infection should be risk assessed and appropriate controls developed.

(28) It is recommended that all staff and students undertaking wet laboratory work have current immunisation for tetanus. Immunisation can be obtained from the medical clinics at each campus or by contacting the supervisor.

- a. Hepatitis B immunisation is required before commencing any activity with unscreened human blood or fluids
- b. Q fever immunisation is required before commencing any activity with sheep, goats, and cattle or with feral animals
- c. Rabies and/or Lyssa virus immunisation is required before commencing any activity with bats or flying foxes

(29) Where a participant does not complete the required immunisation, this circumstance is documented and signed by the participant to demonstrate knowledge and acceptance of the risks.

Part I - Working With Animals

(30) Participants who will be exposed to animal allergens from the planned activities will follow the guideline for Working with Animals to manage the inherent risk that are associated with the tasks undertaken. Managing this risk may include Health monitoring and will be determined through a detailed risk assessment that considers the type of allergen, exposure levels, and the tasks undertaken.

Part J - Health Surveillance

(31) Health surveillance will be instigated and managed when a risk assessment determines this requirement in association with the use of a hazardous substance/s. Base line health surveillance will be established before activity commences and undertaken by the medical clinics that are available or associated with the University at each campus. Monitoring will be managed by the supervisor and records maintained through HR records.

Part K - Disabilities and Medical Restrictions

(32) Where a participant discloses a disability or medical restriction, a risk assessment will be undertaken to identify laboratory activities which may impact the restriction and a plan developed. The plan may address the exclusion to tasks or activities where the levels of control cannot adequately manage the risk. The same process will be followed for pregnancy disclosure.

Section 5 - Definitions

(33) For the purpose of this Procedure:

- a. Disability is any continuing condition that restricts everyday activities.
- b. Hazard is anything with the potential to cause harm. Potential hazards can be identified on the basis of previous experience or from the anticipation of problems that can be reasonably associated with the activity.
- c. Laboratories are facilities that provide controlled environments in which scientific or technological research, experiments, and measurement may be performed. Examples include chemical, anatomical, engineering and geomorphology laboratories and human movement, health monitoring, and information systems laboratories.
- d. Risk control is the allocation of resources or methods to eliminate or to minimise, as far as is reasonably practicable, the risk to safety or health from a hazard.

Status and Details

Status	Historic
Effective Date	27th November 2018
Review Date	27th November 2021
Approval Authority	Senior Executive Group
Approval Date	22nd November 2018
Expiry Date	9th December 2019
Responsible Policy Officer	Regan Sterry Executive Director, Human Resources
Author	Spomenka Krizmanic Manager, Health, Safety & Environment 61 3 9479 2186
Enquiries Contact	Health, Safety and Environment