

**Standard Title:** Work Health and Safety Critical Risks and Controls

**Standard Owner:** Chief Safety Officer

This Standard must be followed to ensure the University complies with its obligations under the *Work Health and Safety Act 2020 (WA)* and should be read in conjunction with the [WHS Hazard Identification and Risk Management Guideline](#).

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## 1. Introduction

### Intent

This Standard outlines the Critical Controls for those Work Health and Safety (WHS) Risks identified in the ECU Hazard Risk Register as Critical Risks.

### Organisational Scope

This standard applies to all ECU Workers and Students.

### Definitions

The [University Glossary](#), the [WHS Definitions Register](#) and the following definitions apply to this standard:

Term	Definition
Cardinal Rules	Rules that stipulate the minimum standards to be in place to manage each Critical Risk.
Critical Risks	Those WHS Risks where the absence or loss of Critical Controls may lead to single or multiple fatalities. Determining whether a hazard poses a Critical Risk considers the inherent risk with no controls in place.
Critical Controls	Controls that must be in place to prevent a fatality or significant injury. The absence or failure of a Critical Control will significantly increase the risk, despite the existence of other controls.
Electrical Work	As defined by the WHS (General) Regulations 2022, electrical work means (a) work (i) on electrical machines or instruments; or (ii) on an electrical installation; or (iii) on electrical appliances or equipment, to which electricity is supplied or intended to be supplied at a nominal pressure exceeding 50 volts alternating current or 120 volts ripple free direct current; and (b) work comprising an assessment of an electrical installation to ensure that the installation and any work done on the installation

Worker	Means any person who carries out work for a Person Conducting a Business or Undertaking (PCBU as defined by the <a href="#">Work Health and Safety Act 2020 (WA)</a> , noting that the University is a PCBU. It includes work as an employee, contractor, subcontractor, self-employed person, outworker, apprentice or trainee, work experience student, employee of a labour hire company placed with a 'host employer' and volunteers. This also includes researchers undertaking research on behalf of the University.
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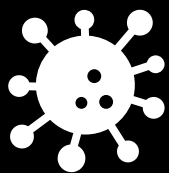
## 2. General Requirements

- ECU WHS Hazard Risk Register identifies the University's Critical Risks and Controls. Each Critical Risk and the associated Critical Controls are outlined in this standard.
- ECU Officers are accountable and Managers, Supervisors and Responsible Officers are responsible for ensuring that Critical Controls are in place for all identified Critical Risks prior to any work being performed and monitored for effectiveness and Cardinal Rules are followed.
- Other controls to eliminate or minimise the risk so far as is reasonably practicable must also be considered through the completion of WHS Hazard Risk Assessments.

## 3. Cardinal Rules

- Cardinal Rules are the fundamental controls that have been identified by the University to minimise the risk of harm occurring when people engage in high-risk activities.
- Each Critical Risk has a Cardinal Rule that must be followed in order to commence the work.
- When a Cardinal Rule is not followed, this is considered a WHS Incident and should be reported and investigated in accordance with the [Incident Reporting and Investigation Guideline](#).
- Where someone knowingly disregards a cardinal rule, it may constitute a breach of their obligations as an employee, student or contractor and disciplinary action may be taken.

## 4. Critical Risks



# Biological Agents



## Exposure to Biological Agents

*E.g., Exposure to biological and infectious diseases in health care facilities, during teaching, research and operational activities.*



### Cardinal Rule



**Before undertaking work with biological agents, I will conduct a risk assessment and gain approval from the Radiation Biosafety and Hazardous Substances Committee.**

### Critical Controls:

- Restricted access to authorised personnel
- Activities performed in approved, certified or purpose-built facilities where required by legislation
- Containment using Biosafety/Biological cabinets
- Immunisation against occupationally acquired vaccine-preventable diseases
- Clinical waste autoclaved before disposal
- Single use disposable needles used
- Mandatory personal protective equipment for infection control used
- Containment and decontamination of biological agent spills

### Mandatory Permits, Licenses and Training

- WHS Risk Assessment and RBSHC Application in [Riskware](#)
- Biosafety and GMO Training module in ELMO
- Department of Agriculture, Fisheries and Forestry Approved Arrangement Accredited Person Training, where required related to Approved Arrangements
- Certified Phlebotomy Training, when undertaking phlebotomy
- Physical Containment inductions for staff and students working in laboratories
- Premises approved or certified by the relevant Regulator e.g. Office of the Gene Technology Regulator
- Annual licence and individual permits in place when working with animals
- Controlled shipping and movement of biological samples, vector insects, materials, soils, sand and rocks, infectious substances and genetically modified organisms (GMO) from outside Western Australia in line with regulatory requirements.

### Resources

- [ECU Radiation Biosafety and Hazardous Substances website](#) – information on Biosafety and Biosecurity
- [RBHS application and approval process](#)
- [Infection Control Policy](#)
- [Immunisation Guideline](#)
- [Biosafety Management Plan](#)



# Confined Space

## Potential for change in the atmosphere or depletion of oxygen within a confined space

*E.g., Entry to pipes, tunnels, manholes, tanks.*



### Cardinal Rule



**I will only work in a confined space if I am trained, a permit to work and spotter is in place and the atmosphere is safe.**

### Critical Controls:

- Controlled (restricted) and safe means of access/egress
- Confined Spaces identified and signed
- Atmospheric monitoring conducted
- Safe environment established by forced ventilation/purging or use of self-contained breathing apparatus
- Hazardous energy sources isolated
- Stand-by person/Spotter in place and continuously communicating and monitoring conditions
- Oxygen, acetylene and other gas cylinders are not located in Confined Space excluding self-contained breathing apparatus
- Electrical equipment used is grounded and explosion-proof
- Rescue Plan in place, communicated and rescue equipment available at the job location

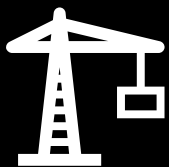
### Mandatory Permits, Licenses and Training

- Confined Space Permit and Rescue Plan
- Job Safety Analysis
- Confined Space Training that meets requirements of AS2865-2009 Confined Spaces delivered by a Registered Training Organisation for workers and stand-by person/spotter
- Contractor Health and Safety Induction for contractors undertaking confined space entry.
- Responsible Officer (RO) Training for ROs overseeing contractors undertaking confined space entry.

### Resources

- Confined Space Registers – Joondalup, Mount Lawley, South West Campus
- [Confined Space Permit – Generator and Log](#)
- [Permit to Work Procedure](#)
- [Minimum Requirements – Confined Space Entry](#)
- [Rescue Plan template](#)
- [Job Safety Analysis Process Work Instruction](#)
- Contractor Health and Safety Induction – Contractor Induction System ([MobiliseME](#))
- [Responsible Officer Training \(MobiliseME\)](#)

ECU has a subscription to [Enviroessentials](#). Visit the page on [Confined Spaces](#) for all legislative requirements related to confined spaces.



# Crane Operations

## Being hit by a falling or unsecured load during crane and lifting activities.

*E.g., Exceeding load ratings, tilting crane or dropped load*



### Cardinal Rule



**Before operating cranes, I will make sure I am trained and a permit to work and exclusion zone are in place.**

### Critical Controls:

- Barricades and signage used to establish an exclusion zone to restrict personnel working or passing in the vicinity of the suspended load
- Cranes equipped with an anti-two block device or limit switch with audible and visual alarms
- Lifting equipment identified with load rating
- Overhead travelling cranes fitted with audible alarms for all directions of travel
- Rigging equipment inspected prior to any lift
- Preoperational safety checks conducted
- Tag lines or devices used to avoid direct contact with suspended loads
- Where fitted, seatbelts are worn
- Two-way method of communication in place
- Whilst the crane is in operation, the operator must not leave the crane controls or use a mobile phone

### Mandatory Permits, Licenses and Training

- Cranes and Lifting Permit
- Critical Crane Lift Plan for critical lifts
- Job Safety Analysis
- High Risk Work Licence for scaffolding, dogging, rigging, crane and hoist operation
- Trained in dogging, rigging and/or Crane operation through a Nationally Registered Training Organisation
- Contractor Health and Safety Induction for contractors undertaking crane and lifting activities.
- Responsible Officer (RO) Training for ROs overseeing contractors undertaking crane and lifting activities.
- Mobile Cranes with a rated capacity greater than 10 tonnes registered with WorkSafe WA

### Resources

- [Permit to Work – Generator and Log](#)
- [Critical Crane Lift Plan](#)
- [Minimum Requirements - Cranes and Lifting](#)
- [Permit to Work Procedure](#)
- [Job Safety Analysis Process Work Instruction](#)
- Contractor Health and Safety Induction – Contractor Induction System ([MobiliseME](#))
- Responsible Officer Training ([MobiliseME](#))

ECU has a subscription to [Enviroessentials](#). Visit the page on [Plant](#) for all legislative requirements related to Cranes and Lifting.



# Drowning

## Potential for drowning when involved in water activities

*E.g., Diving, snorkelling, use of watercraft including boats and kayaks, outdoor education.*



### Cardinal Rule



**I will conduct water activities within the limits of my capabilities, training and approval.**

### Critical Controls:

#### General

- Equipment and vessel pre-activity checks, scheduled inspections and maintenance conducted
- Personal Floatation Device used

#### Diving Specific

- Divers registered before diving undertaken
- Dive Trip Approval system used
- Appointed and trained Dive Supervisor, Coordinator and Team Leaders
- Australian Dive Medical obtained, and evidence provided
- Dive Plans completed, approved and communicated to all parties

### Mandatory Permits, Licenses and Training

- WHS Risk Assessment in [Riskware](#)
- Competence requirements, qualifications and licence (e.g. boating, diving, dive supervisor, bronze medallion)
- Diving certification appropriate for diving activities undertaken
- Field induction and Pre work brief for fieldwork activities
- First Aid Training

### Resources

#### School of Science

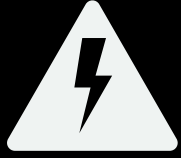
- [Dive Operations Procedures Manual](#)
- [Vessel Operations Safety Management System Manual](#)
- [Human Powered Vessel Procedure Manual](#)
- [Fieldwork Procedures Manual](#)
- [Field Emergency Procedures Manual](#)
- [Field, Dive and Vessel forms](#)

#### Digital and Campus Services

- [Dinghy Use on Campus Lake Work Instruction](#)

ECU has a subscription to [Enviroessentials](#). Visit the page on [Diving Work](#) for all legislative requirements related to diving.





# Electricity

## Electric Shock or Electrocution

*E.g., Arising from faulty equipment, misuse of equipment, poor maintenance or failure to isolate.*



### Cardinal Rule



**Before undertaking electrical work, I will ensure I am licenced and the equipment is isolated.**

### Critical Controls:

- Restricted access to hazardous areas e.g., plant rooms, electrical substations
- RCD protection and testing in place
- Electrical isolation and lock out procedures completed
- Electrical installation by licenced electricians
- Maintenance, testing, tagging and inspection of electrical equipment and plant conducted
- Mandatory ECG testing conducted after actual or suspected electric shock
- Metal ladders and timber ladders with exposed wire reinforcement are not used where an electrical hazard exists

### Mandatory Permits, Licenses and Training

- WA Electrical Licence and WA Electrical Contractor's licence
- Isolation Permit
- Excavation and Penetration Permit – for excavation or penetration into a building or structure
- Job Safety Analysis
- Contractor Health and Safety Induction for contractors undertaking electrical work.
- Responsible Officer (RO) Training for ROs overseeing contractors undertaking electrical work.

### Resources

- [Electrical Safety Procedure](#)
- [University Electrical Contractors Work Instruction](#)
- [Minimum Requirements – Isolation and Lock Out Isolation Permit - Generator and Log](#)
- [Excavation and Penetration Permit – Generator and Log](#)
- [Minimum Requirements – Excavation and Penetration](#)
- [Permit to Work Procedure](#)
- [Job Safety Analysis Process Work Instruction](#)
- Contractor Health and Safety Induction – Contractor Induction System ([MobiliseME](#))
- Responsible Officer Training ([MobiliseME](#))

ECU has a subscription to [Enviroessentials](#). Visit the page on [Electricity](#) for all legislative requirements related to electrical work.





# Emergency Events

## Injuries arising from emergency situations

*E.g., Fire, bushfire, bomb threat, active shooter, violence and aggression, medical emergency, unauthorised access to secured high risk areas (Restricted access laboratories, server rooms, liquid nitrogen facility, electrical substations).*



## Cardinal Rule



**I will ensure my emergency evacuation training is up to date and I will follow emergency instructions.**

## Critical Controls:

- Smoke detectors and fire suppression systems in place
- Mosaic burns, mechanical fuel load clearance, fire break maintenance and inspection conducted
- Access control systems used, CCTV monitoring conducted and security guard presence on campus
- Current Emergency Management Plan in place
- Emergency exits kept free of obstructions and clearly marked
- Efficient, inspected and maintained fire extinguishers, blankets and hoses
- Management and minimisation of explosive and flammable materials
- First Aid Kits and Defibrillators in place and regularly inspected
- Trained Area/Floor Building Wardens and First Aiders in place

## Mandatory Permits, Licenses and Training

- ECU Emergency Evacuation Training ([Staff LMS](#)) and evacuation exercises
- [First Aid Training](#) for First Aiders
- Emergency Warden Training (online and in person) and evacuation exercises for Area/Floor Wardens ([Staff LMS](#))

## Resources

Digital and Campus Services:

- [ECU Emergency Management Plan](#)
- [Emergency procedures for types of emergencies e.g Chemical spill, fire etc](#)
- [Evacuation Procedures](#) and campus evacuation maps ([Joondalup](#), [Mount Lawley](#), [South West](#))
- [Emergency and Incident Management Operational Standard](#)
- [Security incidents Work Instruction](#)
- [NowForce App](#) use for direct access to Security and when working alone
- Joondalup Bushfire Management Plan and South-West Campus Bushfire Management Plan

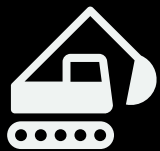
Strategic and Governance Services:

- [Critical Incident and Business Continuity Policy and Guidelines](#)

People and Culture:

- [First Aid Guideline](#)
- [Smoke Free University Guideline](#)

ECU has a subscription to [Enviroessentials](#). Visit the page on [Emergency Planning](#) for all legislative requirements related to emergency management.



# Excavation and Penetration



## Injury arising from excavation or penetration works

*E.g., Falling into excavated area, contacting underground services, causing flooding or gas leak, structure penetration contacting electrical services.*



### Cardinal Rule



**Before undertaking excavation or penetration work on ECU sites I will make sure a permit is in place, check for services and perform any required isolations.**

### Critical Controls:

- Work areas hoarded, fenced and barricaded
- Checks for in-ground services conducted prior to excavation
- Drawings and plans checked for services and asbestos before penetration activities
- Hazardous energy isolation and lockout procedures completed

### Mandatory Permits, Licenses and Training

- Excavation and Penetration Permit
- Job Safety Analysis
- Contractor Health and Safety Induction for contractors undertaking excavation and penetration works.
- Responsible Officer (RO) Training for ROs overseeing contractors undertaking excavation and penetration works.

### Resources

- [Excavation and Penetration Permit – Generator and Log](#)
- [Minimum Requirements – Excavation and Penetration](#)
- [Permit to Work Procedure](#)
- [Job Safety Analysis Process Work Instruction](#)
- [Asbestos Management Plan](#)
- [Asbestos Management Work Instruction](#)
- Contractor Health and Safety Induction – Contractor Induction System ([MobiliseME](#))
- Responsible Officer Training ([MobiliseME](#))



# Falls

## Fall of person or object from height

*E.g., Working at heights including on roofs, scaffolds, elevated work platforms and ladders.*

*Outdoor education and scientific activities such as abseiling also pose a fall fatality risk and must have a controls in place based on a completed risk assessment, though these may vary from the critical controls listed below.*



### Cardinal Rule



**I will only work at heights of 2m or more if I am trained and have implemented fall protection controls based on a completed risk assessment.**

### Critical Controls:

- Inspected and tested fall restraint equipment used when working at heights of  $\geq 2$  metres
- Approved, inspected and tested fall arrest/restraint system used when walking or working within 2 metres of a roof edge or other fall hazard
- Working at heights must not be conducted alone
- A spotter is in place where working at heights requires PPE
- Restricted access and entry points in place in the work area
- Handrails, barriers and barricaded work areas in place
- Tool straps, perimeter screens/mesh, kickboards and drop mats used
- Roof safety systems and anchor points certified and inspected
- Use of scaffolding, fixed and elevated work platforms
- Rescue Plan in place, communicated and rescue equipment available at the job location

### Mandatory Permits, Licenses and Training

- Working at Heights Permit and rescue plan
- Job Safety Analysis
- Valid nationally recognised Working at Height training for workers and spotters
- Valid nationally recognised Elevated work platform training
- High Risk Work Licence for scaffolding
- Contractor Health and Safety Induction for contractors working at heights.
- Responsible Officer (RO) Training for ROs overseeing contractors working at heights.

### Resources

- [Working at Heights Permit – Generator and Log](#)
- [Rescue Plan template](#)
- [Minimum Requirements - Working at Heights](#)
- [Permit to Work Procedure](#)
- [Job Safety Analysis Process Work Instruction](#)
- [Scissor Lift Elevated Platform Work Instruction](#)
- [Safe Use of Ladders Guideline](#)
- Contractor Health and Safety Induction – Contractor Induction System ([MobiliseME](#))
- Responsible Officer Training ([MobiliseME](#))

ECU has a subscription to [Enviroessentials](#). Visit the page on [Falls](#) for all legislative requirements related to working at heights.



# Hazardous Substances

## Exposure to Hazardous Substances during transportation, storage and use

*E.g., Scheduled poisons, substances with a ChemAlert Colour rating of Red or GHS signal word of Danger, engineered nanomaterials, hazardous air-borne particulates.*



### Cardinal Rule



**Before working with high-risk hazardous substances I will gain approval from the Radiation Biosafety and Hazardous Substances Committee.**

### Critical Controls:

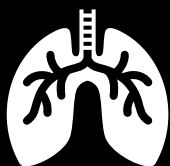
- Restricted access to authorised personnel
- Secure storage and segregation of hazardous substances
- Emergency stops and shut-off valves installed
- Ventilation and extraction used, including mobile and fixed fume extraction cabinets
- Fixed and personal monitors and alarms in place and used
- Chemical risk assessment completed (ChemAlert)
- Time sensitive chemicals dated and regularly inspected
- PPE worn as recommended on Safety Data Sheets
- Emergency showers and eye wash stations installed and accessible
- In-date calcium gluconate gel available for emergency response for Hydrofluoric acid
- Emergency procedures for accidental release/spillage developed and communicated
- Substances correctly labelled in accordance with GHS requirements

### Mandatory Permits, Licenses and Training

- WHS Risk Assessment and RBHSC Application in [Riskware](#)
- Chemicals and Hazardous Substances Training module in ELMO
- Liquid Nitrogen training (theory and practical) required every two years
- Hydrofluoric acid training for workers, security and cleaners
- Licenced asbestos removalists
- Licenced Anatomy Facility for cadaver work
- Regulator approval for use of scheduled carcinogens
- Permits – Poisons, Trade Waste
- AICIS approval for importing and manufacturing all hazardous materials

### Resources

- [ECU Radiation Biosafety and Hazardous Substances website](#)
- [RBHS application and approval process](#)
- [ECU ChemAlert System](#)
- [Hazardous Chemicals Policy](#)
- [Asbestos Management Plan](#)
- [Response to Dehydrated Picric Acid Procedure](#)
- [Safe Work Australia: National guide for Classifying hazardous chemicals](#)
- [Managing the Risks of Respirable Crystalline Silica from Engineered Stone in the Workplace Code of Practice](#)



# Lack of Oxygen



## Asphyxiation arising from working with or in spaces with substances that displace oxygen.

*E.g., Being trapped in server rooms during a fire emergency with the deployment of an oxygen depletion system. Use or transportation of Liquid Nitrogen in an enclosed space.*



*Please refer to Drowning for water based asphyxiation risk.*

### Cardinal Rule



**Before working in areas of asphyxiation risk, I will make sure there are operating oxygen depletion monitors and alarms and a clear mode of egress.**

### Critical Controls:

- Restricted access to authorised personnel
- Tested and inspected audible and visual oxygen depletion alarms in place
- Fixed oxygen meters installed in Oxygen depleting gas storage facilities and regularly inspected
- Mechanical extraction system installed in storage facilities
- Calibrated personal oxygen monitors worn when using oxygen depleting gases
- Visible placarding and signage in place
- Observer in place to raise the alarm if required
- Travel in a lift or enclosed vehicle with Liquid Nitrogen prohibited

### Mandatory Permits, Licenses and Training

- WHS Risk Assessment and RBHSC Application in [Riskware](#)
- Liquid Nitrogen training module in ELMO and training in school specific procedures.

### Resources

School specific Liquid Nitrogen procedures:

- [School of Science Safe Use of Liquid Nitrogen Procedures and information](#)
- School of Medical and Health Sciences (under development)
- School of Engineering (under development)



# Psychological Safety

## Psychological safety risks arising from work-related psychosocial hazards and risk factors

*E.g., High or low work demands, adverse environmental conditions, violence or trauma, poor organisational change management, bullying, discrimination and harassment, including sexual assault and sexual harassment, inadequate support from supervisors and/or co-workers, stress, fatigue, burnout and poor physical health, lack of role clarity, poor leadership practices and workplace culture, poor organisational justice, low recognition and reward, remote or isolated work.*



### Cardinal Rule



**I will act in accordance with ECU's values and raise psychosocial workplace hazards with my manager as soon as they arise.**

### Critical Controls:

- Current Emergency Management Plan in place
- ECU Out of Hours Crisis Line available for Students
- Employee Assistance Program in place and communicated to staff
- Mental Health First Aid Training program in place
- Post-crisis support and debriefing sessions conducted

### Mandatory Permits, Licenses and Training

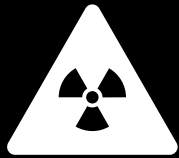
- Equal Opportunity Online Training
- Mental Health First Aid Training for Mental Health First Aid Officers and First Responders

### Resources

- [ECU Staff and Student Mental Health](#)
- [ECU Emergency Management Plan](#)
- [Emergency procedures](#)
- [Crisis Support Resources](#) and [Critical Incident Debriefing](#)
- [Supporting Students: A Staff Guide](#)
- [Supporting Staff: A Staff Guide](#)
- [Fitness for Work Guideline](#)
- [Injury and Illness Management Procedure](#)
- [Employee Assistance Program](#) and [Guideline](#)
- [Student Psychological Counselling Service](#)
- [ECU Staff Code of Conduct](#)
- [ECU Student Code of Conduct](#)
- [Sexual Assault and Sexual Harassment Policy](#)
- Sexual Assault and Sexual Harassment [Staff](#) and [Student](#) portals
- [Flexible Working Hours Policy](#)
- [Flexible Work Arrangements Guidelines](#)
- [ECU Leave Policy](#) and [entitlements](#)
- [ALLY](#) network and training
- [ECU Health and Wellness Program](#)

ECU has a subscription to [Enviroessentials](#). Visit the page on [Psychological Hazards](#) for all legislative requirements related to psychological hazards.





# Radiation

## Exposure to Radiation

*E.g., From the use of equipment, substances and apparatus including lasers, XRD machines, CT machine (industrial), Tel-x-ometer, DEXA and pQCT, UV transilluminators and UV sterilisation boxes.*



## Cardinal Rule



**I will gain Radiation Biosafety and Hazardous Substances Committee approval before undertaking work involving radiation.**

## Critical Controls:

- Restricted access to trained and authorised personnel
- Enclosed beams in devices
- Interlock devices in place and operational
- In-built shielding in facilities
- Machine and facility e-stops installed
- Personal Radiation Monitoring device (dosimeter) worn
- Activities performed in approved, certified or purpose-built facilities where required by legislation
- Radiation storage areas are secured
- Radiation leak checks conducted
- Equipment and apparatus regularly inspected and maintained

## Mandatory Permits, Licenses and Training

- WHS Risk Assessment and RBHSC Application in [Riskware](#)
- Radiation Safety Training module in ELMO
- Specific radiation training for particular radiation types:
  - Bone Densitometry Operators Course for DEXA use (External) and in-person induction from licence holder for DEXA and/or pQCT
  - Laser Safety Course for laser use (External)
  - Portable Gauging Radiation Safety course for portable radiation gauges (External)
  - Fixed Gauging Radiation Safety course for fixed radiation gauges (External)
  - X-ray Analysis course for personnel using x-ray analysis equipment (External)
  - Unsealed Radioisotopes course for personnel working with unsealed radioisotopes (External)
- Radiation Licence Holders – Radioactive Substances
- Radiation Licence Holders – Irradiating Apparatus and/or Electronic Products
- Irradiating apparatus, electronic products and radioactive substances registered with Radiological Council
- Appointed Radiation Safety Officer for ECU
- Facilities approved by Radiological Council

## Resources

- [ECU Radiation Biosafety and Hazardous Substances website](#)
- [RBHS application and approval process](#)
- [Radiation Safety Management Plan](#)

ECU has a subscription to [Enviroessentials](#). Visit the page on [Radiation](#) for all legislative requirements related to radiation.





# Tools and Machinery

## Injury arising from the use of tools, machinery and pressurised equipment

*E.g., Operating, modifying or maintaining equipment, machinery and tools with moving parts that may result in crushing, entanglement or cuts or where release of pressure may cause injury.*



### Cardinal Rule



**I will work on machinery I am trained to operate and will make sure guarding is in place.**

### Critical Controls:

- Restricted access to competent and trained personnel
- Interlocks in place
- Equipment guarding in place and in good condition
- Emergency E-stops installed
- Isolation and lockout procedures completed during maintenance
- Clothing suited to the activity is worn e.g., no loose clothing, hair or jewellery
- Faulty equipment is placed out of service
- Pressure relief valves and vents fitted on pressurised equipment
- Flashback arrestors fitted on welding equipment

### Mandatory Permits, Licenses and Training

- WHS Risk Assessment in [Riskware](#) / Job Safety Analysis
- Tool and machinery specific training and competencies e.g., bench grinder, drill press, welding
- Isolation Permit
- Classified plant and equipment registered with WorkSafe
- First Aid Training

### Resources

- [Isolation and Hot Work Permit - Generator and Log](#)
- [Minimum Requirements – Isolation and Lock Out](#)
- [Minimum Requirements – Hot Work](#)
- [Job Safety Analysis Process Work Instruction](#)

Digital and Campus Services:

- Safe Work Procedures - [PL24 Bin Lifter](#), [Abrasive Cut Off Saw](#), [Belt Disc Sander](#), [Bench Grinder](#), [Billy Goat Vacuum](#), [Drill Press](#)
- [Asset Maintenance Program Work Instruction](#)
- [Asset Condition Monitoring Work Instruction](#)
- [Scissor Lift Elevated Platform Work Instruction](#)
- [Induction and Training of Staff in the use of Machinery and Equipment Work Instruction](#)

ECU has a subscription to [Enviroessentials](#). Visit the page on [Plant](#) for all legislative requirements related to plant and equipment including classified plant.



# Vehicle Operation

## Vehicle and mobile equipment incidents

*E.g., During travel on, off and between campuses in both metropolitan and regional locations.*



### Cardinal Rule



**I will comply with road rules and only drive vehicles I am licenced to operate.**

### Critical Controls:

- Use technology for meetings instead of in person attendance where possible
- Seatbelts worn by all vehicle occupants
- Vehicle selection considers safety features is roadworthy and appropriate to the activity
- University vehicles that are regularly inspected, serviced and maintained are used
- Operation in compliance with road rules, speed limits (on and off campus) and driving to the conditions
- Emergency Plan in place and communicated, including First Aid provisions for remote travel
- Communication suitable for the location (UHF radio, mobile phones, Satellite phone) is in place before travel
- Loads are safely secured
- Designated walkways, barricading and bollards in place on campus to reduce pedestrian/vehicle interaction

### Mandatory Permits, Licenses and Training

- WHS Risk Assessment in [Riskware](#)
- Vehicle specific licences and competencies e.g. 4WD training
- High Risk Work Licence for Forklift Operation
- Vehicle operation training for staff using golf buggies on Joondalup campus

### Resources

- Fieldtrip, Event and Travel Module in [Riskware](#)
  - [ECU Poolcar booking system](#)
  - [Authorised University Travel Policy](#)
  - [Travel Approval System](#)
  - [Fleet Vehicles and Private Vehicle use for University Business Policy](#)
  - Traffic Management Plans
- WAAPA
- Vehicle Induction and booklet
- School of Science:
- [Vehicles and Driving information](#)
  - Fieldwork information and procedures (from the [Fieldwork Procedures Manual](#))
  - [Vehicle Inspection procedure](#)

Safe Work Australia has a guide to [Traffic Management](#) for further information.

## 5. Related Documents

- [WHS Risk Assessment Procedure](#)
- [WHS Hazard Identification and Risk Management Guideline.](#)

## 6. Contact Information

For queries relating to this Document please contact:

<b>Standard Owner</b>	Chief Safety Officer
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## 7. Approval History

<b>Standard approved by</b>	Chief Safety Officer
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