AUSTRALIAN INSTITUTE *for* INNOVATIVE MATERIALS | UOW AUSTRALIA

# AIIM Induction Handbook

**Intelligent Polymer Research Institute**
**Institute for Superconducting & Electronic Materials**
**Electron Microscope Centre**

*AIIM-OHS-001v14* *Next Review: January 2019*

# Table of Contents

# Appendices

# 1. Introduction

The Australian Institute for Innovative Materials (AIIM) Facility which houses the University of Wollongong's flagship research centers'; the Institute for Superconducting and Electronic Materials; the Intelligent Polymer Research Institute; and the UOW Electron Microscopy Centre; is situated on the University of Wollongong's Innovation Campus at North Wollongong.

The AIIM Facility houses world class laboratory facilities and equipment including scanning electron microscopes, x-ray diffraction apparatus, mass spectrometers, NMR, pulsed laser deposition chambers, a radiation laboratory, PC2 areas, a full mechanical workshop, a class 1000 Clean Room, a 15,000L liquid nitrogen tank and a 6,000L liquid argon tank.

Compliance with WHS procedures is essential, especially in view of the inherent dangers in the cutting edge research laboratories in this facility. We are committed to meeting our requirements and providing a safe working environment.

This handbook is designed to assist you with any safety enquires you may have while working in the AIIM Facility. Please do not hesitate to contact the Laboratory and Safety Operations Officer if you have any queries (joanne_george@uow.edu.au).

Further information can be found at the UOW WHS home page SAFE@WORK@UOW

All the safety information contained in this manual and other related documents can be found in the general folder in the shared AIIM 's' drive ***S:\AIIM\AIIM General***

# 2. UOW Workplace Health & Safety Policy

## MAKING THE WORKPLACE SAFER
## CONNECT: WORKPLACE HEALTH & SAFETY POLICY

**PURPOSE**

The University of Wollongong is committed to providing a safe and healthy workplace for its workers, students and visitors. This Policy defines the principles of this commitment and the University's approach to the continuous improvement of health and safety in the workplace.

This Policy sets out the overarching principles for the University's commitment and management of work health and safety requirements and gives effect to the University's Workplace Health and Safety Management Plan, Workplace Health and Safety Management System, procedures and guidelines.

All members of the University community have a collective and individual responsibility to work safely and be engaged in activities to help prevent injuries and illness.

**APPLICATION & SCOPE**

This Policy applies to all workers of the University of Wollongong as well as students, affiliates and other visitors. Entities of the University are required to outline their commitment to work health and safety through their own Policy and management system.

**PRINCIPLES**

The University will undertake the following activities in fulfilling its commitment to provide a healthy and safe workplace:

- Develop, implement and maintain a health and safety management system which includes the requirements of this Policy
- Comply with applicable health and safety legislation as well as other requirements such as Codes of Practice or Australian Standards
- Implement a health and safety risk management process to ensure workplace hazards are identified, assessed, controlled and reviewed where they are not able to be eliminated
- Allocate sufficient financial and physical resources to enable the effective implementation of the Workplace Health and Safety Policy
- Provide, handle and store equipment, structures, substances and systems of work without risk to health
- Provide and disseminate health and safety training and information to workers, students and visitors
- Implement arrangements for the consultation of health and safety matters with workers and students
- Establish measureable objectives and targets for health and safety aimed at the elimination of work-related illness and injury
- Report on measurements and targets to Council and Central WHS Committee
- Ensure that the WHS Unit and local area websites are updated with current legislative and University of Wollongong WHS Management System requirements.

**ROLES & RESPONSIBILITIES**

The Vice-Chancellor has responsibility for, and is committed to, the effective implementation of the University Workplace Health and Safety Policy.

- The Senior Executive will support Deans, Department Heads, Managers and Supervisors to fulfil their health and safety responsibilities and accountabilities within their area of responsibility.
- University Council has the responsibility to oversee the monitoring of the University's workplace health and safety performance against objectives and targets.
- All workers, students and visitors have a responsibility to take reasonable care for their own safety and the safety of others and comply with any reasonable instruction, policy or procedures of the University in relation to health and safety.
- The Workplace Health and Safety Unit is available to provide advice regarding specific health and safety matters, update the University on legislative changes and assist with the development, implementation and monitoring of this Policy and the workplace health and safety management system.

Further description of health and safety responsibilities are outlined in the UOW document Roles and Responsibilities for Workplace Health and Safety.

This Policy will be regularly reviewed following legislative or organisational changes, or as a minimum, every five years.

Professor Paul Wellings CBE
Vice-Chancellor
September 2012

UNIVERSITY OF WOLLONGONG

## 2.1 ROLES & RESPONSIBILITIES FOR WORKPLACE HEALTH AND SAFETY IN THE AIIM FACILITY

The University of Wollongong and the AIIM Facility are committed to ensuring the health, safety and welfare of its workers; students; visitors and contractors. As such, all of these parties have WHS responsibilities, authority and accountabilities.

By reporting and addressing potential hazards in the AIIM Facility, the AIIM community can assist the University of Wollongong in taking every reasonably practicable step to providing a safe environment.

All staff have the responsibility and authority to ensure that a safe working environment exists within the AIIM Facility and that they fulfill their WHS obligations. All staff will be held accountable for ensuring that they fulfill their WHS responsibilities.

The University will ensure that the requirements outlined by the NSW Work Health and Safety Act 2012 (WHS Act 2012) and associated legislation are complied with at all University facilities. Legislated and other accredited standards in health and safety are accepted by the University as minimum standards. The AIIM Facility will apply a risk management approach and establish and enforce more stringent standards where appropriate. Resultant policies and procedures are considered as binding upon all persons entering the AIIM facility.

### 2.1.1 THE UNIVERSITY OF WOLLONGONG

In accordance with the WHS Act 2012, the University of Wollongong has the responsibility of ensuring the health, safety and welfare of their workers and others when at work by:

- Safe systems of work
- A safe work environment
- Safe use of plant, substances and structures
- Adequate facilities for the welfare of workers
- Notification and recording of workplace incidents
- Adequate information, training, instruction and supervision
- Compliance with the requirements under the Work Health and Safety Regulation
- Ensuring systems are in place for monitoring the health of workers and workplace conditions

In addition, the University will have meaningful and open consultation about work, health and safety with its workers and stakeholders.

### 2.1.2 Workers

The term ‘worker’ includes any person who works for the University as an:

- Employee
- Trainee
- Volunteer
- Outworker
- Apprentice
- Work experience student

- Contractor or sub-contractor
- Employees of a contractor or sub-contractor

Workers, students and others must take reasonable care of the health and safety of themselves and others and must co-operate with employers in efforts to comply with work health and safety requirements.

All persons must not:

- Interfere with or misuse things provided for the health, safety or welfare of persons at work;
- Obstruct attempts to give aid or attempts to prevent a serious risk to the health and safety of a person at work;
- Refuse a reasonable request to assist in giving aid or preventing a risk to health and safety; or
- Disrupt a workplace by creating health or safety fears

**ALL PERSONS MUST REPORT HAZARDS IN THE WORKPLACE SO THEY CAN BE EFFECTIVELY MINIMISED**

More information can be found in the 'Roles and Responsibilities for Work Health and Safety Document' at: http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow016892.pdf

# 3. Critical Alarms in the AIIM Facility

## 3.1 FIRE ALARMS

If you hear a continuous siren or see red flashing lights, leave the building immediately and go to the appropriate assembly area. Please see the evacuation map on page 8**.** Please stay in the assembly areas until you are accounted for. Do not re-enter the building until given the all clear by the Chief Warden.

## 3.2 GAS ALARMS

Most of the laboratory areas in the AIIM Facility are fitted with a variety of gas sensors. These are particular to the laboratory areas but could include lower explosive limit, carbon monoxide, carbon dioxide, hydrocarbon, Sulphur and nitrogen gases. Set points for these sensors have been determined according to lower explosive levels or the National Exposure standards for atmospheric contaminants. Room gas alarm evacuation lights are blue flashing lights.

If you hear a gas alarm, leave the area immediately. If possible, contain the gas by closing the door. Only re-enter the room when the gas alarm has ceased. Outside the rooms, blue flashing lights are visible. **DO NOT ENTER A LABORATORY WHERE THE BLUE LIGHT IS FLASHING.**

**The AIIM Facility has an M40 Multi-gas monitoring system in building 231, ground floor kitchen.** This portable monitor is capable of continuously and simultaneously measuring atmospheric levels of oxygen, hydrogen sulphide, carbon monoxide and Lower Explosive Limits (LEL). AIIM staff and Resolve FM staff are trained in its use. This monitor will be used in the event of an emergency, where personnel may have to enter a hazardous atmosphere to rescue others. It may also be used to verify data from the gas detection system for calibration purposes.

## 3.3 OXYGEN DEPLETION ALARMS

Oxygen depletion alarms are fitted into rooms with the potential for an asphyxiating atmosphere to occur. Oxygen depletion alarms sound inside the room when the atmospheric oxygen falls below 19.5%.

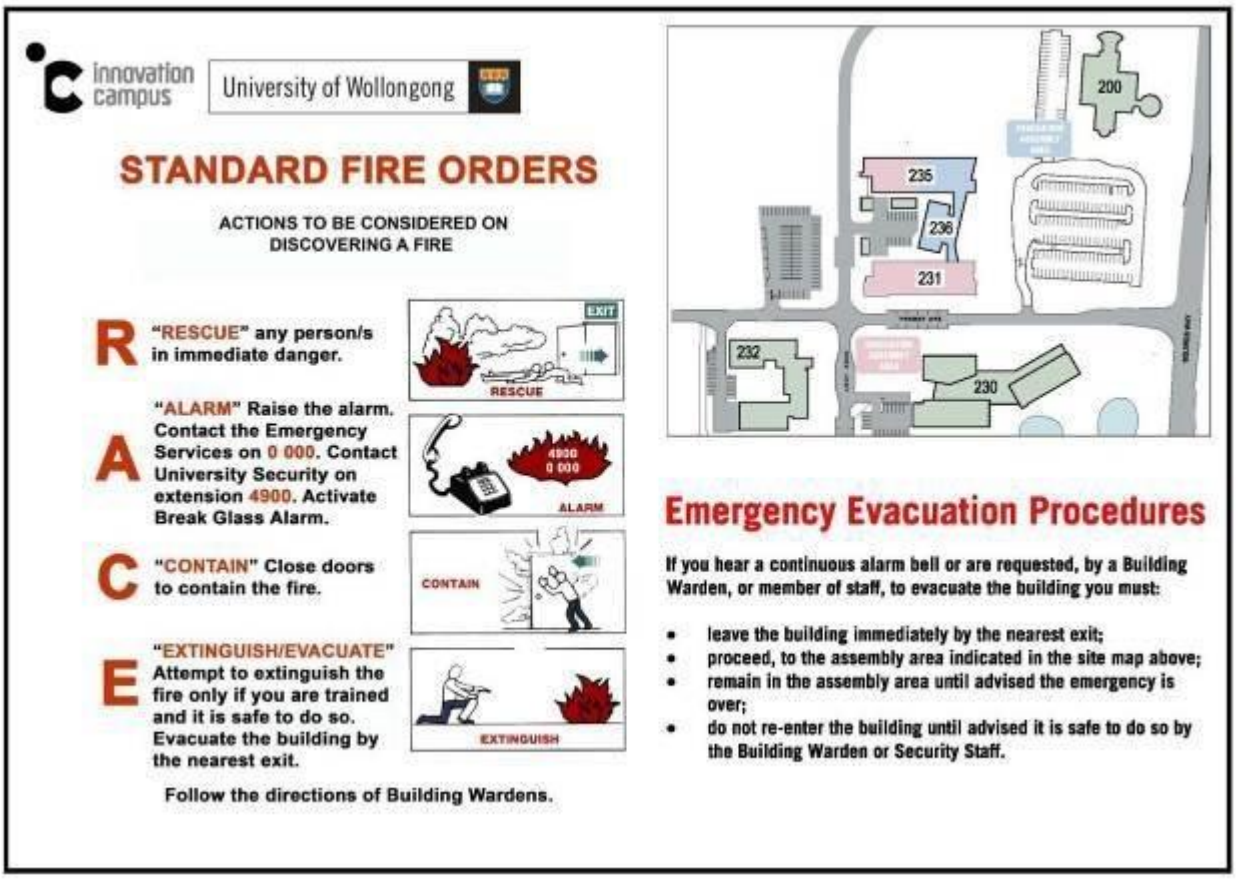
Outside the rooms, blue flashing lights are visible. If you hear an oxygen depletion alarm, leave the area immediately. **DO NOT ENTER A LABORATORY WHERE THE BLUE LIGHT IS FLASHING.**

## 3.4 VENTILATION ALARMS

Ventilation alarms are activated when the building management control system detects a pressure change. This normally occurs if too many fume cupboards are operating with the sashes in the upright position, or in high wind events. **VENTILATION ALARMS ARE INDICATED BY THE FLASHING ORANGE LIGHTS ON THE CEILING OF THE CORRIDOR OF THE LABORATORY AREAS.**

Ventilation alarms will turn off automatically when the correct air pressure is restored. To facilitate this, please pull all fume cupboard sashes down. **If a ventilation alarm is triggered, please leave the ventilation zone.**

# 4. Emergency Evacuation Procedures




| **Emergency Contact Numbers** | |
|---|---|
| If using an internal phone, please dial '0' for an external line. | |
| Police, Fire Ambulance | 000 |
| Poisons Information | 131 126 |

The AIIM Facility has a number of designated and trained building wardens. They will advise what to do in the event of an emergency. Please follow their directions. A list of building wardens can be found in Appendix I on page 36.

# 5. Use of Emergency Equipment

## 5.1 FIRE EXTINGUISHERS

The laboratories and offices at the AIIM Facility are equipped with Carbon Dioxide ($CO_2$) Extinguishers (colour coded red with a black band), which can be activated by removing the pin and squeezing the handle. This type of extinguisher can be used against all fires at a relatively close distance (test before use).

Smother the fire well with a good layer of $CO_2$ but never use the fire extinguisher on a person. If there is any risk from the fire, the building should be evacuated.

Where flammable solids are used, dry chemical extinguishers (colour coded red with a white band) are available, which can be activated by removing the pin and squeezing the handle. This type of extinguisher can be used for flammable solids at a distance of 2 meters (test before use).

If a fire extinguisher has been used, report it immediately to the Laboratory and Safety Operations Officer.

## 5.2 FIRE BLANKETS

Fire blankets are located throughout the AIIM Facility. They can be used to smother flames in minor fires but only without taking personal risk. A fire blanket should not be used in an electrical fire.

## 5.3 SAFETY SHOWERS

Safety showers are available throughout the AIIM Facility wherever hazardous substances are used. Please see the floor plans on pages 12 - 14.

These are full drench showers with a flow rate of 2 litres/ second (i.e. 120L/minute). Safety showers are only to be used in an emergency.

Pull the handle down to release the water. The safety showers at AIIM are not alarmed and do not automatically turn off. To turn the shower off, push the handle back up. If you have to use a safety shower, we will automatically seek medical advice for you. Please remain under the shower for at least 15 minutes.

Safety showers are tested on a monthly basis.

## 5.4 EYE WASHES

Eye wash facilities are available throughout the AIIM Facility wherever hazardous substances are used. Please see the floor plans for the AIIM facility on pages 12 - 14.

Eyewashes are activated by pushing the eyewash station down. If you require eyewash, we will automatically seek medical aid for you. Please continue to flush your eyes for at least 15 minutes.

## 5.5 EMERGENCY STOP BUTTONS

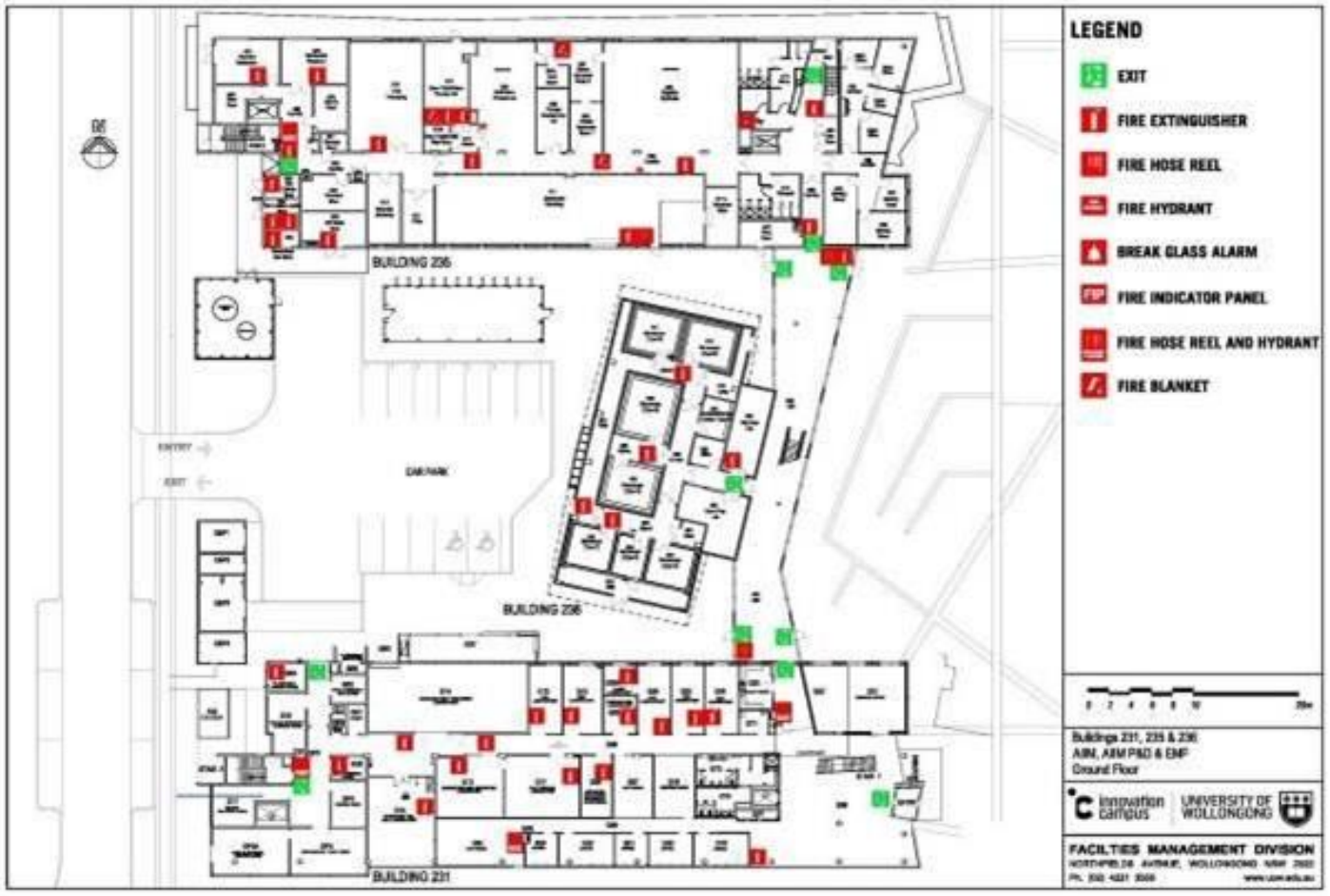
Emergency stop buttons are available in all laboratories. Please see the floor plans on pages 11 - 13. If these are pushed, all power to the laboratory and those around it will be turned off; as will all gas supplies. Push the emergency stop button only in an emergency.

## 5.6 SPILL KITS

Appropriate spill kits are available in each laboratory and in the chemical stores. These contain absorbent material, neutralizing material and bundling to contain spills. If these are used, please inform the Laboratory and Safety Operations Officer so they can be replaced.

# 6. Location of Emergency Equipment and AIIM Facility Floor Plans

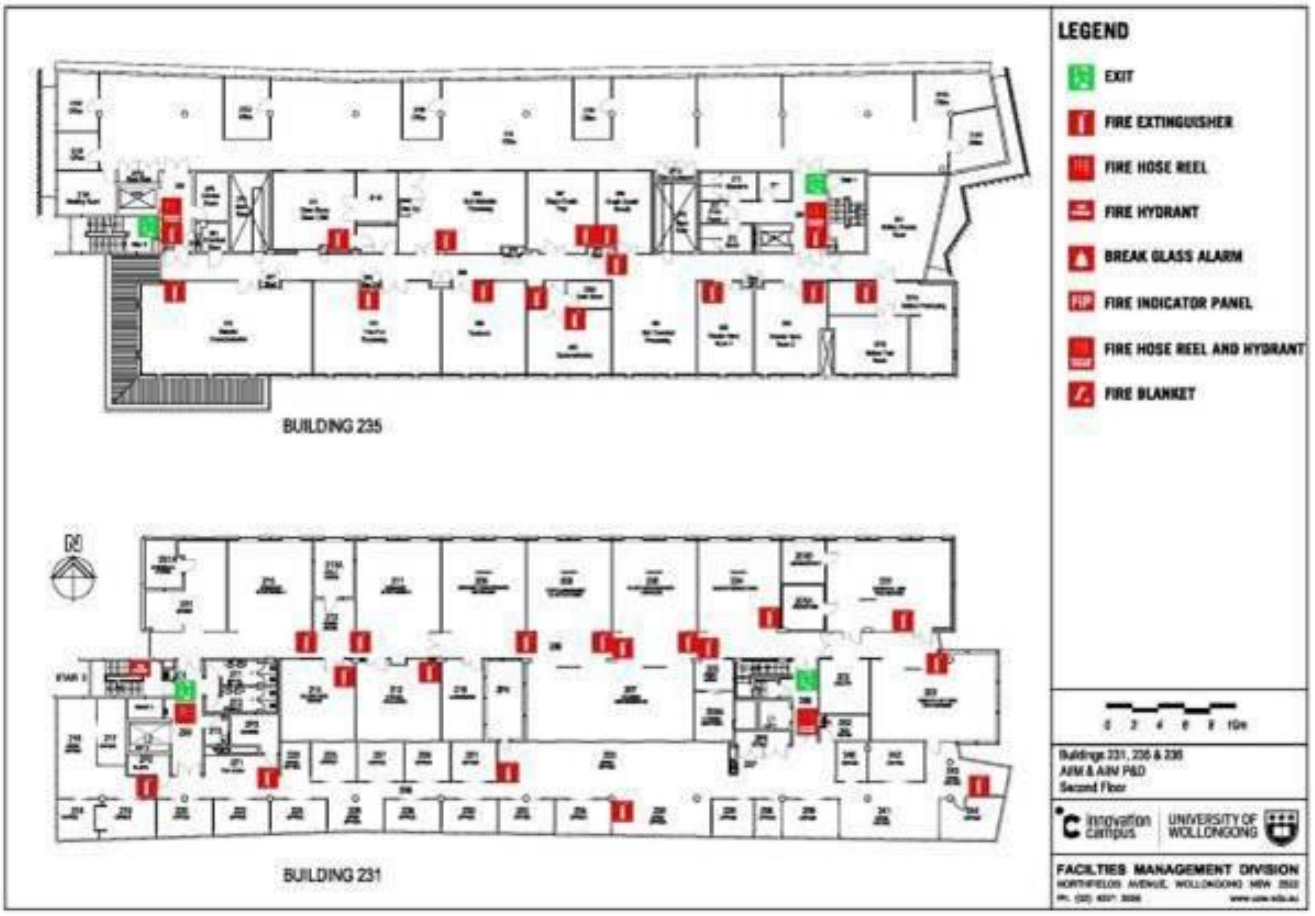
## GROUND FLOOR



## FIRST FLOOR


LEGEND
EXIT
FIRE EXTINGUISHER
FIRE HOSE REEL
FIRE HYDRANT
BREAK GLASS ALARM
FIRE INDICATOR PANEL
FIRE HOSE REEL AND HYDRANT
FIRE BLANKET
BUILDING 236
BUILDING 236
BUILDING 231
Buildings 231, 235 & 236
AIIM, AIIM P&D & EMF
First Floor
Innovation Campus
UNIVERSITY OF WOLLONGONG
FACILTIES MANAGEMENT DIVISION

**SECOND FLOOR**




# 7. First Aid Kits

First aid kits are available in laboratory and office areas and can be used for any minor accident. If you use something from a kit or something is required in a kit, please inform the Laboratory and Safety Operations Officer.

If you use the kit, please fill out an incident/hazard report through SafetyNet (http://staff.uow.edu.au/ohs/managinginjuries/reporting/index.html).

SafetyNet is available through the UOW WHS Unit homepage (Safe@Work at http://staff.uow.edu.au/ohs/index.html).

A list of AIIM designated first aiders is included in Appendix II on page 37.

# 8. General Laboratory Safety

Compliance with WHS procedures is essential, especially in view of the inherent dangers in laboratory based science.

## 8.1 ACCESS

The AIIM Facility is an access protected facility. Swipe cards will be issued to students and staff in accordance with the AIIM Access guidelines. These can be viewed at ***S:\AIIM\AIIM General/AIIM Access Guidelines***

Normal working hours are from 8 am until 6 pm Monday to Friday.

If you wish to access the facility outside these hours, after hours procedures must be followed. You must sign in and out of the after-hours book at reception, regardless of whether the work will take place in office areas or laboratories.

**Working alone in laboratories is strictly prohibited. There must be at least 2 people working in the laboratory area before you can carry out ANY experiments.**

The after-hours emergency contact is the laboratory supervisor whose name and emergency contact number are displayed in each laboratory. Resolve FM can also be contacted in an emergency on 1300 133 128.

Further information can be found at the University of Wollongong's Working Alone and After Hours Work Guideline at:
http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow017061.pdf

**Access guidelines are in place of emergency management and your own safety. Failure to follow the access guidelines can result in access restrictions.**

## 8.2 PRINTER ACCESS

AIIM operates a 'swipe to print' system. Once you have received your swipe card you will need to activate your card to use the printer. Please follow the below instructions to set up your swipe to print access;

1. If you see the below screen when you first swipe your card


2. If however you see the below screen when you try and print


You will need to call IMTS Support on extension x3000. They will need the full name of the person who previously owned the card (the location of this is circled on the above picture), as well as the card number. They will also ask for your full name. Once you have given IMTS this information they will re-set the card for you and you can then swipe the card on the card reader to log on and print.

## 8.3 INDUCTION

No unsupervised person can enter the laboratory before undertaking an AIIM Facility induction. Inductions are held every Wednesday at 2.00pm. Please contact the Laboratory and Safety Operations Officer (jgeorge@uow.edu.au) or by phone on x3006 to register a place. You must have read the induction document and completed the induction quiz before attending the building induction. **Please ensure enclosed footwear is worn and bring the completed quiz with you when you attend.**

The induction will include a walkthrough of the AIIM Facility with an emphasis on the safety equipment in the building and the safety procedures that need to be followed when working in the AIIM Facility.

Please note that separate inductions are required for the AIIM workshop, clean room and UOW Electron Microscopy Centre.

## 8.4 INCIDENTS/ACCIDENTS AND HAZARDS

The University of Wollongong has an incident reporting protocol for all staff and students. All incidents, hazards and near misses should be reported through the hazard/incident reporting system **SafetyNet** which can be accessed through the WHS webpage or homepage http://staff.uow.edu.au/ohs/managinginjuries/reporting/index.html

Please see the Laboratory and Safety Operations Officer or the laboratory supervisor if you need assistance. If the Laboratory and Safety Operations Officer does not assist you in completing the hazard/incident report, please send a copy to her (jgeorge@uow.edu.au).

## 8.5 AIIM OPERATIONS AND SAFETY COMMITTEE

The AIIM Operations and Safety Committee is responsible for the oversight of daily operations of the facility; and for the development and implementation of policies and procedures required to meet obligations under University policy; and legislative and regulatory requirements, with respect to risk management and workplace consultation. The minutes of Committee meetings are available on the shared AIIM drive. ***S:\AIIM\AIIM General/Operations and Safety Committee***. Please see Appendix IV for Operations and Safety Committee Representatives on page 38.

The Committee meets on a regular basis and you are encouraged to provide any suggestions or concerns regarding safety and operations to the Laboratory and Safety Operation Officer, Joanne George (jgeorge@uow.edu.au).

## 8.6 ATTIRE

Every person working in the AIIM laboratories must ensure that they are correctly attired before undertaking laboratory work.

It is mandatory that all persons working in the laboratories wear laboratory coats, suitable non-slip enclosed footwear and safety glasses at all times. Long hair should be tied back. Contact lenses are not recommended in chemical laboratories. The use of nylon based clothing is advised against. High heeled shoes should not be worn.

Safety glasses and laboratory coats are provided to staff and students at AIIM. These are fitted after attendance atthe AIIM induction session. Once they have been provided, the user is responsible for them and their replacementif required.

The AIIM Facility has a laboratory coat laundering service. Periodically the coats are picked up on a Monday and returned on a Wednesday. When laundering is about to occur, an email reminder is sent. Coats should be labelled in indelible pen with the owners name and institute and delivered to reception.

## 8.7 CONDUCT

Responsible and courteous conduct is expected at all times, whether in the offices or the laboratories. Practical jokes and unauthorized experiments are forbidden.

You should also respect the rights of others at all times and, where appropriate, assist each other in achieving your research goals.

Smoking is not permitted within the AIIM Facility or a 10 meter radius from entrances.

The University of Wollongong has an Employment Equity & Diversity (EED) Unit. For policies associated with equity and diversity (see http://staff.uow.edu.au/eed/index.html ) including but not limited to:

- Disability Policy – Staff Disability Policy - Students
- Equal Employment Equity and Workforce Diversity Policy Grievance Policy
- Inclusive Language Guidelines
- Procedures for Investigating Grievances
- Respect for Diversity Policy
- Sexual Harassment Prevention Policy

If necessary, appropriate ethics policy and clearances should be obtained for research projects. Information about this is available at www.uow.edu.au/about/policy/research/index.html

## 8.8 HOUSEKEEPING

Work areas should be kept well organized and good housekeeping practice should always be followed when using laboratories to reduce the risks of spillage and other accidents.

Benches should be kept clean and free of equipment not in use. Benches and equipment should be thoroughly cleaned after use. The interior of fume cupboards should be kept clean and clear. Chemicals should not be stored in fume cupboards but in the appropriate storage locations.

## 8.9 VISITORS

All visitors must report to reception and be signed into and out of the AIIM Facility as part of the access requirements. Visitors should also be escorted while in the building.

## 8.10 CHILDREN IN THE WORKPLACE

Consistent with University policy, children under 15 years of age should not be in the laboratory.

Note: There will however be special circumstances in which children may enter the above areas. These circumstances MUST be with the full knowledge and permission of the Head of Institute and include full consideration of appropriate supervisory measures. Examples of special circumstances include Open Day activities, Science School activities with school children, participation in research involving children that has been approved by the Ethics Committee.

In those circumstances when children must accompany a student or a staff member while they are in the AIIM offices, the parents or nominated guardians retain ultimate responsibility for the safety of children in their care and must ensure their children are supervised at all times.
Parents or nominated guardians should not expect staff or students to look after the child. It must be ensured that the presence of children in the offices does not disrupt normal research activity.

Please refer to the University of Wollongong Children in the Workplace and Study Environment Policy when considering bringing children into AIIM: http://www.uow.edu.au/about/policy/UOW058657.html

## 8.11 TRAINING AND USE OF EQUIPMENT

It is the responsibility of all users to ensure they have been fully instructed in, and understand the use of equipment, before operating it. No equipment of any type may be operated unless the person is authorized to do so. Authorization is obtained by participation in a process of training, and the awarding of competencies by the trainers. Training will be conducted against approved safe work procedures where suitable.

## 8.12 CHEMALERT, SDS AND ORDERING AND USING CHEMICALS

All users must have consulted the safety data sheets (SDS) for each chemical compound and consumable they require for an experiment prior to ordering it. The safe use, storage and disposal of these compounds must be addressed in a risk assessment. When ordering chemicals please check ChemAlert to ensure the SDS is available. If it is not, please download the SDS as a PDF with the naming convention: Catalogue Number, Name, Supplier, and send it to the Laboratory and Safety Operations Officer for inclusion on the ChemAlert system.

Assume all substances are hazardous unless there is definite information to the contrary. The SDS gives details of the characteristics of the chemical, any hazards associated with its use, disposal restrictions, spillage clean-up procedures, personal protective equipment required, and any other relevant safety instructions. Specific risks associated with hazardous substances can be addressed using the AIIM barcode form on page 33 (S:AIIM\AIIM General/AIIM Barcoding).

**Chemicals orders will not be processed without a valid SDS, Barcode form and an approved risk assessment on SafetyNet**

For more information please refers to the UOW Working with Hazardous Chemicals guidelines located at: http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow017028.pdf

http://staff.uow.edu.au/ohs/managingrisk/riskmanagementprinciples/index.html

http://staff.uow.edu.au/ohs/workingsafely/safeworkprocedures/index.html

## 8.13 RISK ASSESSMENTS

Risk assessments must be signed and approved by the academic and laboratory supervisor for **EVERY** experiment you perform. Information on risk assessment is available at:

http://staff.uow.edu.au/ohs/managingrisk/riskmanagementprinciples/index.html

General risk assessments are part of the on-line SafetyNet system and are available to all staff and Higher Degree Research students. Please contact the Laboratory Safety and Operations Officer for assistance if required.

Risk assessments take into account all hazards of the work being undertaken, how these hazards can be controlled most effectively and a review of these controls. Risk assessment documentation must reference appropriate legislation e.g. Radiation Control Act, Australian Standards (available through the UOW Library database search), codes of practice and UOW WHS guidelines. These reference sources will usually contain appropriate hazard control measures.

When considering appropriate control mechanisms, the hierarchy of controls should be kept in mind.

- Elimination
- Substitution
- Engineering controls
- Administrative controls
- Personal protective clothing and equipment

A risk assessment guideline is available in the general folder of the AIIM share drive **s:\Aiim\AiimGeneral\How to construct a risk assessment**

## 8.14 SAFE WORK PROCEDURES

Safe work procedures (SWP's) must be recorded through SafetyNet for each piece of equipment in the AIIM Facility. SWP's can be searched using SafetyNet and modified to suit the laboratory area which houses the equipment.

http://staff.uow.edu.au/ohs/workingsafely/safeworkprocedures/index.html

Completed safe work procedures should be displayed with the equipment they refer to. A safe work procedure guideline is available in the general folder of the AIIM Share drive **s:\Aiim\AiimGeneral\How to construct a safe work procedure**

## 8.15 LABELLING

All substances and samples must be labelled appropriately. Normally chemicals supplied to the workplace, by a known chemical supplier, will be correctly labelled, however if the substance has been decanted or repackaged, it must be relabeled.

If the substance has been decanted and is to be used within 8 hours then it needs only to have the name and relevant risk or safety phrases.

The information that must be present on a label depends on the size of the container. Generally containers for compounds made or decanted in a research lab are **less than 500ml.**

The labels should have the following:

- Signal words, dangerous goods class and subsidiary risks
- Name
- Other ingredients (solvent) UN No.
- Risk and Safety phrases
- First aid procedures
- Details of the person who prepared the sample –name and contact
- Expiry date
- Reference to SDS

The system used for **sample containers or very small vials**, which may not have room for an individual label is to attach a label to the sample rack or box and/or have an information sheet which can be referred to.

If a container has stored volumes **greater than 500mL**, such as a stock solution or prepared mixture, the following additional information is required:

- UN Number, directions for use; and
- Emergency procedure

For more information, please refer to the AIIM 'Labelling of Workplace hazardous Chemicals' document available on the AIIM Shared 'S' drive ***S:\AIIM\AIIM General/Dangerous Goods, Labelling and SDS.***

## 8.16 DANGEROUS GOODS

Dangerous goods have a physical characteristic that may cause harm to people or the environment. Not all substances have a dangerous goods class.

The Australian Dangerous Goods Code regulates the transport and storage of dangerous goods.

Dangerous goods must be segregated by dangerous goods class (and if possible packaging group) for storage in the AIIM Facility.

- Class 3 Flammable Liquids (yellow cabinets) and Class 8 Corrosives (blue cabinets) must be stored in approved cabinets.
- Acids and alkalis should not be stored together
- Nitric and acetic acid should not be stored together
- Class 6.1 Toxic materials must be stored in a locked cabinet (white cabinets)
- Notice should be taken of subsidiary classes i.e. Class 3 (6.1) – this is both flammable and toxic – the major hazard is the flammability

Dangerous goods storage information is available in all of the AIIM chemical stores. Further information can be sought from the AIIM Laboratory and Safety Operations Officer or the AIIM Chemical Procurement Officer.

Trained and licensed dangerous goods packers are also available for the safe packaging and transport of dangerous goods from AIIM. Further information is available in the Dangerous Goods, Labelling and Safety Data Sheet folder in the AIIM share drive **S:AIIM\AIIM General\dangerous goods, Labelling and SDS**

## 8.17 GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION OF CHEMICALS

The Globally Harmonized System of Classification and Labelling of Chemicals were adopted in 2011, along with the new harmonized Work Health and Safety Act and Regulations. The Globally Harmonized System of Classification and Labelling of Chemicals (GHS) is a single internationally agreed system of chemical classification and hazard communication through labelling and Safety Data Sheets (SDS). It applies criteria to classify chemicals based on intrinsic hazards.

The GHS covers single substances, solutions and mixtures. It includes harmonized criteria for the classification of:

- physical hazards,
- health hazards, and
- environmental hazards

**The GHS does not exclude compliance with the Australian Dangerous Goods Code for storage and transport of workplace hazardous chemicals.**

The GHS uses '**Danger**' and '**Warning**' as signal words to indicate the relative level of severity of a hazard. 'Danger' is used for the more severe or a significant hazard, while 'Warning' is used for the less severe hazards.

Further information is available in the Globally Harmonized System of Classification folder in the AIIM share drive **S: AIIM\AIIM General\Globally Harmonized System of Classification**

## 8.18 CRYOGENS

The AIIM Facility has a large volume of cryogenic liquids, both liquid nitrogen and liquid argon. These are contained in large vessels and supply both liquid and gaseous nitrogen and argon. The use of cryogenic liquids presents specific hazards. Trained personnel only should handle these liquids.

For more information regarding the safe use of cryogens please refer to the University of Wollongong's storage transport;
**https://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow158672.pdf**

## 8.19 RADIATION

The AIIM Facility is equipped with a low level radiation laboratory. No work can be undertaken in this space unless the appropriate risk assessments, safe work procedures, standard operating procedures, spill clean-up documentation, waste storage documentation and appropriate licenses are produced.

For more information, please refer to the University of Wollongong Radiation Safety Guidelines at:

http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow017051.pdf

## 8.20 LASER SAFETY

Only suitably qualified and registered personnel may operate laser equipment in the AIIM facility. Laser safety guidelines are available at:
http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow017039.pdf

All persons who use Class 4 or Class 3B [other than class 3R (restricted)] lasers are to complete the **Laser Use Registration Form** and receive eye examinations and retinal scans. This should be done:

- At the commencement and termination of work with lasers of these classes
- Following any apparent or suspected laser exposure in excess of the relevant maximum permissible exposure (MPE)
- Following any serious injury to, or illness of the eye

Eye examinations must be performed by an optometrist or ophthalmologist.

## 8.21 BIOSAFETY

The AIIM Facility contains PC1 and PC2 laboratories. Only authorized personnel may enter the PC2 laboratories.

The AIIM Facility abides by all legislative requirements for biosafety and the University of Wollongong's biosafety policy which can be found at:
http://staff.uow.edu.au/ohs/workingsafely/biosafety/index.html

## 8.22 MANUAL HANDLING

The most common workplace injuries sustained are manual handling injuries. The AIIM Facility is committed to minimizing the risks associated with manual handling. To this end dedicated lifting and moving equipment is available including a pedestrian operated forklift and pallet jack. If you wish to use this equipment, please contact the Workshop and Process Facilities Manager Mat Davies on mathewd@uow.edu.au or x3894.

For more information regarding manual handling, please refer to the University of Wollongong's Manual Handling Guidelines available at:
http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow017041.pdf

The manual handling risk assessment form is available at:
http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow017040.pdf

## 8.23 FUME CUPBOARDS, LAMINAR FLOW CABINETS, BSC II & VENTILATION

The AIIM Facility is fitted with fume hoods, fume cupboards, scrubbed fume hoods, laminar flow cabinets and Class II biological safety cabinets. They all have their own modes of operation and operating instructions are available for each. Please contact the Laboratory and Safety Operations Officer (jgeorge@uow.edu.au) for more information.

The AIIM Facility has a delicate ventilation and air balance system. The building is designed so that 80% of the fume cupboards can be run simultaneously with the sashes up. Please lower the sash of your fume cupboards when finished. Conversely, having no running fume cupboards can also be problematic. At a minimum, the fume cupboards in 112 on Level 1 and the fume cupboard in 201A should always be left on.

## 8.24 PERSONAL PROTECTIVE CLOTHING & EQUIPMENT (PPCE)

Personal protective clothing and equipment (PPCE) is required throughout the AIIM Facility. No person can enter the laboratory areas without appropriate enclosed footwear. Laboratories also require eye protection in the form of safety glasses and laboratory coats to be worn. Some areas of the AIIM Facility have particular PPCE requirements. **Please consult with the Laboratory Supervisor as to the requirements of your laboratory.**

## 8.25 HAZARDOUS WASTE PROCEDURES

A number of waste streams including solid waste, contaminated solid waste, chemical waste, biological waste and possibly at a future time, low level radioactive waste are produced at the AIIM Facility. All waste generated is disposed of according to the University of Wollongong's waste disposal guideline.

**In addition the AIIM Facility has a strict nil by sink policy.**

http://staff.uow.edu.au/content/groups/public/@web/@ohs/documents/doc/uow017032.pdf

The waste store is opened monthly and a reminder is sent to users. Waste which is not labelled appropriately will not be accepted. Labels and waste containers are available from the Laboratory and Safety Operations Officer.

**Each waste stream has its own collection process:**

### 8.25.1 Solid Waste

Typical household solid waste such as kitchen waste, paper towels etc. is disposed of in normal rubbish bins located around the building. These bins are emptied by the cleaning staff.

**UNDER NO CIRCUMSTANCES SHOULD CHEMICAL WASTE, SHARPS OR BROKEN GLASS BE PLACED INTO THESE BINS.**

### 8.25.2 Contaminated Solid Waste

Contaminated solid waste such as gloves, paper towels used to clean spills in laboratories and broken laboratory glass should be placed into the contaminated solid waste bins available on each level. These are 240L wheelie bins and are clearly marked 'CONTAMINATED SOLID WASTE ONLY'. These bins are collected on a monthly basis and emptied by the University of Wollongong's waste disposal contractor.

CHEMICAL WASTE SHOULD NOT BE PLACED INTO THESE BINS.

### 8.25.3 Recyclable Glass and Empty Chemical Containers

A recyclable glass collection bin is available in laboratory areas. Winchesters which have been decontaminated can be placed into this container which will be emptied as required. **UNDER NO CIRCUMSTANCES CAN CONTAMINATED GLASS CONTAINERS OR LABORATORY GLASS SUCH AS BEAKERS, VOLUMETRIC FLASKS OR OTHER PYREX ITEMS BE PLACED IN THIS BIN.** These must be disposed of through the contaminated solid waste bins. Empty chemical containers with a bar code should be placed in the orange bins in the laboratories so the bar code and chemical can be removed from the inventory.

### 8.25.4 Sharps

Sharps such as needles, syringes, razor blades etc. should be disposed of in approved yellow sharps containers. These containers should be adjacent to the working area where sharps are used. When the container is 2/3 full, it should be sealed and labelled appropriately. It should be disposed of through the hazardous waste collection process.

### 8.25.5 Biohazardous Waste

All biohazardous material should be autoclaved on-site before disposal into normal solid waste bins. Biohazardous waste should be placed into metal buckets lined with autoclave bags. Biologically contaminated glass is autoclaved and then placed into the contaminated solid waste bins located in the laboratory area.

### 8.25.6 Chemical Waste

Chemical waste should be segregated according to its properties:

- Aqueous Acidic
- Aqueous Alkaline
- Halogenated
- Toxic
- Non-halogenated
- Miscellaneous Hazardous Waste – liquid and solid

### 8.25.7 Radioactive Waste

Low level solid radioactive waste generated in the AIIM Facility such as blotting paper, paper towels etc. should be labelled and stored in red radioactive waste bags until it has reached a safe background level. The storage time will depend on the isotope being used. Liquid waste should be collected in appropriately labelled 5L plastic containers. Containers and labels are available from the Laboratory and Safety Operations Officer.

### 8.25.8 Electronic Waste

Should be taken to the AIIM Workshop for disposal

### 8.25.9 Battery Recycling

Most commercial dry cell batteries can be recycled. A battery recycling deposit box is located in the Kitchenette next to IC Health in **building 230 The Central.** Please contact the AIIM Workshop and Process Facilities Manager, Mat Davies on mathewd@uow.edu.au, if you have any questions.

### 8.25.10 Mobile Phone Recycling

A mobile phone recycling deposit box is available in the kitchenette next to C Health in **building 230 The Central.** Please contact the AIIM Workshop and Process Facilities Manager, Mat Davies on mathewd@uow.edu.au, if you have any questions.

## 8.26 ELECTRICAL SAFETY

The electrical equipment at the AIIM Facility is monitored for safety at regular intervals, particularly electrical cables. Report any faulty cables that appear dangerous, or equipment with an "out-of-date" clearance sticker to your lab supervisor or the Workshop and Process Facilities Manager Mat Davies on x3894 or mathewd@uow.edu.au

**Do not use faulty equipment until it has been repaired and cleared as suitable for use by a competent and qualified person.**

Ensure that electrical cables and equipment are kept off floors where possible to facilitate cleaning and minimize hazards in the event of flooding. When cables MUST run over the floor, ensure that they are taped down firmly to reduce any trip hazard. For more information please refer to the electrical safety guidelines available at: http://staff.uow.edu.au/ohs/workingsafely/electricalsafety/index.html

### 8.27 LABORATORY INSPECTIONS

The AIIM Facility will fulfill its legal requirements in regards to workplace inspections by having 6 monthly laboratory inspections and audits. These are undertaken by an inspection team who work off a specified checklist. Corrective actions from these inspections with appropriate completion timeframes are provided to laboratory supervisors and Directors.

Laboratory supervisors are encouraged to check their areas on a monthly basis.

### 8.28 REPORTING FAULTS

All building faults and issues should be reported to the AIIM Workshop and Process Facilities Manager Mat Davies on x3894 or mathewd@uow.edu.au, under no circumstances should you try and repair faults.

# 9. Workshop

The AIIM Workshop is located on the ground floor within the Process and Devices building. The Workshop consists of a Mechanical/Machine workshop with separate Electrical/Electronic workshop.

The Workshop was designed to provide a wide range of capabilities to compliment research activities. The workshop has the following capabilities:

- CNC Machining Centre
- Lathe, Mill
- Bandsaws
- Guillotine
- Pan Brake Bender
- Grinders
- Linisher
- Pedestal Drills
- MIG/TIG Welding

The Electrical/Electronic part of the workshop is able to test, modify, repair and build all types of electrical/electronic equipment and devices.

All equipment sent to the workshop for maintenance or repair must be cleaned and decontaminated first.
All Electrical delivered to AIIM must be tested and tagged by workshop personnel before use.

**A separate Workshop Induction is required to be able to work within the Workshop. These inductions are done by appointment only and conducted by the AIIM Workshop and Process Facilities Manager Mat Davies x3894 or mathewd@uow.edu.au**

# 10. UOW Electron Microscopy Centre

The UOW Electron Microscopy Centre (EMC) comprises seven microscopy suites that optimize individual microscope performance, and two specimen preparation laboratories, plus offices for technical and research staff, students and visiting academics..

The building environment for each microscopy suite has been designed to be retro-fitted via a tiered system to minimize the environmental effects of: (i) mechanical vibration through independent, isolated concrete floor slabs and the separation of ancillary utilities from the area of microscope operation, (ii) acoustic noise cancellation through surface isolation and insulation, (iii) magnetic interference through active and passive shielding, (iv) electrical and electromagnetic fluctuation via independent distribution boards, double online conversion uninterrupted power supplies (UPS) and twisted pair electrical wiring and, (v) thermal variations via passive chill beams for radiant cooling and maintaining positive air pressure within the room.
The preparation laboratories are purpose built and designed to be ancillary to the microscopy suite by housing high precision cutters, quality grinding and polishing tools, room temperature and cryogenic microtomes for serial sectioning and highly accurate ion polishing systems. Both laboratories cater to a range of materials such as metals, ceramics, polymers and biological specimens.

**A separate induction is required to be able to work within the Electron Microscopy Centre. These inductions are conducted by appointment through Tony Romeo (x3258) or tromeo@uow.edu.au**

# 11. Clean Room

The AIIM Facility contains a class 1000 clean room. Class 1000 refers to the limits of particulates allowable which is strictly controlled. The clean room minimizes airborne particulates and contaminants by using a recirculating air supply and positive air pressure to prevent entry of contaminants. It contains a scanning electron microscope, electron beam lithography equipment and ion etching/magnetron sputtering equipment. In order to maintain the classification of the clean room, access and usage arrangements are governed separately. Induction and training are prerequisites for use of the AIIM Facility clean room.

**A separate clean room induction is required to be able to work within the AIIM Facility Clean room. These inductions are conducted by appointment through Professor Alexey V Pan (x4729) or alexy_pan@uow.edu.au.**

# 12. Purchasing Procedures

A requisition form must be completed for each purchase and these forms are available from each Research Unit's Administrative Assistant.

| | | |
|---|---|---|
| Administration Officer to ISEM (Level 1 Building 231) | Crystal Mahfouz | x5730 |
| Administrative Assistant to IPRI (Level 1 Building 235) | Delvene McKenzie | x3127 |
| Administrative Assistant to IPRI (Level 1 Building 235) | Phil Smugreski | x1439 |

A new requisition is required for each supplier you are ordering goods or services from.

Complete all sections taking note to include your name, phone number and/or email. If you need more space please add a blank sheet for additional items.

For chemicals and other substances an AIIM Barcode form is required (***S:\AIIM\AIIM General/AIIM Barcoding***). For equipment purchase, a risk assessment which takes into account the risks of the equipment, the electrical safety and how the equipment will be delivered and how it will be situated in the AIIM Facility may be required. Purchases requiring a risk assessment will not be processed until one is provided.

If the purchase is chemical, please check the relevant chemical inventory **(*S:\AIIM\AIIM General/AIIM chemical inventories*)** and ChemAlert to ensure the SDS is available. If it is not, please download it as a pdf with the naming convention catalogue number_name_supplier and send to the Laboratory and Safety Operations Officer for inclusion on the ChemAlert system.

*Conflict of interest must be considered and duly noted if applicable. Assess whether purchase requires Ethics clearance.*

Purchase requisitions have to be signed by the responsible officer (the account holder), or if you are a student it must be signed by your supervisor or the head of your research area.

The University has a list of preferred suppliers for the provision of certain goods and services; the Preferred Supplier list is located on the Financial Services intranet site. Where there is a requirement for goods and/or services to be procured from an alternative supplier, the staff member shall substantiate the reason for the decision. Documented evidence, such as

a substantially cheaper quote or details of better service provided, shall be attached to the purchase order within Basware or within the University Records Management System (IT). A full list can be found at https://intranet.uow.edu.au/finance/purchasing/suppliers/index.html

If an equipment purchase is greater than $2000 you are required to complete a Life Cycle Costing form and Financial Assessment Request available from the Research Unit's Administrative Assistant.

For purchases of greater than $5,000 but less than $20,000 one written quotation must be obtained. For purchases of greater than $20,000 but less than $100,000 three written quotations must be obtained.

Ensure that all paperwork, quotes etc. are attached to the requisition before forwarding to the Research Unit's Administrative Assistant.

When goods arrive the AIIM Administrative Assistant will receive the goods and notify you. Chemical purchases will be processed by the AIIM Procurement Officer to ensure that chemical inventories and ChemAlert stocks remain current. An email regarding collection of chemicals will be sent to the purchaser from the AIIM Procurement Officer.

If you have any queries about your request please see the AIIM Administrative Support Assistant located at reception or by contacting x3271. Failure to complete all sections and all associated paperwork may result in delays in the ordering of your goods/services.

## AIIM FACILITY PURCHASE REQUISITION

**REQUISITION NUMBER: AIIM 0049**

**Requested by:** _____ **Bld/Rm #** _____ **Email** _____ **Phone Ext** _____

**SUPPLIER DETAILS:**

**Name** _____ **Contact Person** _____

**Address** _____ **Phone #** _____ **Fax #** _____

| Qty | Pack Size | Description | Storage (Room / Lab No.) | Cat # | Unit Price (excl GST) | Total Price (excl GST) | Account Number |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

***FOR A LIST OF ALL REQUIREMENTS PLEASE CONSULT THE OH&S PURCHASING GUIDELINES AVAILABLE AT:***
*http://staff.uow.edu.au/ohs/workingsafely/purchasing/*

| | | | | | |
|---|---|---|---|---|---|
| | | **DELIVERY COSTS (Excl GST)** | | | |
| **IF MORE ROOM IS REQUIRED PLEASE ATTACH SEPEARATE LIST ALONG WITH ANY SUPPORTING DOCUMENTATION** | | **Total value of Order (excluding GST)** | | **$** | |

Certification (this must be completed by Supervisor or Responsible Officer)

**I hereby confirm the following:**

| | |
|---|---|
| **a)** I have the appropriate ethics clearance for this purchase<br>Ethics Number; _____ | Y ☐ N ☐ n/a ☐ |
| **b)** Does this purchase relate to an asset? | Y ☐ N ☐ |
| **c)** For orders over $2,000 all quotes are attached<br>If no, please provide justification | Y ☐ N ☐ |
| **d)** Have all OH&S Requirements been considered | Y ☐ N ☐ n/a ☐ |
| Does the item(s) you are ordering require a risk assessment | Y ☐ N ☐ n/a ☐ |
| Has the risk assessment been completed ? | Y ☐ N ☐ n/a ☐ |
| **e)** For Chemical purchases<br>Is the MSDS available on Chemalert<br>In No, please tick applicable option<br>Electronic copy sent to aiim-facility@uow.edu.au ☐<br>Hard copy attached ☐ | Y ☐ N ☐ |
| **f)** Is there a Conflict of Interest? | Y ☐ N ☐ |
| **Signed:**<br>**Print Name** **Date** | |

Authorisation (must be completed by HoD or delegated authority)

| | |
|---|---|
| **Print Name** | **Paul Scully** |
| **Staff ID** | **3411315** |
| **Date** | |
| **Signature** | |
| **ORDER NUMBER:**<br>**Purchasing Officer Signature:** | |
| **Approved By:** | **Date:** |

**ALL SECTIONS MUST BE COMPLETED BEFORE THE ORDER CAN BE PLACED**

# AIIM BARCODING FORM

| | | |
|---|---|---|
| Chemical Name: | | |
| Quantity (unit): | CAS Number | |
| Supplier: | Supplier Catalogue Number | |
| Purchaser Name: | Signature | Date |
| a) **Is the Substance a dangerous good?** | Yes ☐ | No ☐ |
| If Yes | Class(Section 14 of SDS) | |
| | Packaging Group(Section 14 of SDS) | |
| | UN Number(Section 14 of SDS) | |
| | Poison Schedule (Section 15 of SDS) | |
| Building and Lab/room number where chemical will be used: | | |

| Specific storage area in lab | Shelf | Corrosive Cabinet | Flammable Cabinet | Toxic Cabinet | Refrigerator | Freezer | Other - Please specify |
|---|---|---|---|---|---|---|---|
| | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | |
|---|---|
| How Used: | Volume Used: |
| **b) Does the substance have a GHS Classification?** | Yes ☐ No ☐ |

**Hazard Identification**

| | | |
|---|---|---|
| (Section 2 of SDS) GHS Classification | If Yes | What is the GHS class and category? |
| | | |
| | | |
| | | |
| | | |
| What is the signal word? | | |
| What is the hazard statement(s)? | | |
| Occupational Exposure Limit (Section 8 of SDS): | | |
| **SafetyNET Risk Assessment Number:** | | |

**Risk Rating (refer to table on opposite page)**

Risk Level: **High** ☐ **Medium** ☐ **Low** ☐ **Negligible** ☐

**Control Measures (Section 8 of SDS)**

| | | | | | |
|---|---|---|---|---|---|
| Eye Protection | ☐ | Air monitoring | ☐ | Storage/transport | ☐ |
| Face Shield | ☐ | Fume cupboard | ☐ | Spill Kit | ☐ |
| Protective Clothing | ☐ | Safety screen | ☐ | Special first aid equipment | ☐ |
| Gloves | ☐ | Room ventilation | ☐ | Health surveillance | ☐ |

## Determining Rating Risk

Step 1 – Consider the Consequences  Step 2 – Consider the Likelihood  Step 3 – Calculate the Risk

### Step 1 – Consider the Consequences

What are the consequences of this incident occurring? Consider what could reasonably have happened as well as what actually happened. Look at the descriptions and choose the most suitable Consequence.

**CONSEQUENCES**

| Consequence | Description |
|---|---|
| Severe | Death or extensive injuries |
| Major | Medical treatment |
| Moderate | First aid treatment |
| Minor | Injury report, no treatment |

### Step 2 – Consider the Likelihood

What is the likelihood of the consequence identified in step 1 happening? Consider this without new or interim controls in place. Look at the descriptions and choose the most suitable Likelihood.

**LIKELIHOOD**

| Likelihood | Description |
|---|---|
| Almost Certain | Is expected to occur in most circumstances |
| Likely | Will probably occur in most circumstances |
| Possible | May occur at some time |
| Unlikely | May occur, but probably never will |

### Step 3 – Calculate the Risk

1. Take step 1 rating and select the correct column
2. Take Step 2 rating and select the correct line
3. Circle the risk score where the two ratings cross on the matrix below.

H = High, M = Medium, L = Low

| LIKELIHOOD | CONSEQUENCES: Minor | Moderate | Major | Severe |
|---|---|---|---|---|
| Almost Certain | M | M | H | H |
| Likely | L | M | H | H |
| Possible | L | L | M | H |
| Unlikely | L | L | M | M |

## Additional Controls to Minimise Risk

| | |
|---|---|
| **Elimination** (Can the hazardous substance be removed?) | |
| **Substitution** (Can an alternative substance be used that is less hazardous?) | |
| **Isolation** (Can the substance be isolated to reduce exposure?) | |
| **Engineering** (Can the process be altered to reduce exposure?) | |
| **Administration** (Will administration controls reduce risk? Add SafetyNET SWP and RA number and training) | |
| **PPCE** (Will personal protective equipment minimise risk? What PPCE is needed- please specify ) | |

Supervisors Signature _____ Date _____

Supervisors Name _____

# 13. AIIM Vehicle Use

The AIIM Facility has a vehicle available for use by staff for work related matters. Vehicle bookings can be made through the AIIM Administrative Support Assistant (x3271).

You will need to complete an 'Authority to Drive' before you use the vehicle. This only needs to be completed once. Every time you book the vehicle you will also be required to complete a vehicle booking sheet available at reception.

There is a log sheet that has to be completed with the following details kilometer reading OUT and IN when the vehicle is returned as well as the total amount of kilometers traveled, signature of the person driving the vehicle and the destination.

# 14. Version Control

| Version Control | Date Released | Approved By | Amendment |
|---|---|---|---|
| 1.1 | 9/8/2010 | AIIM OHS Officer | No significant changes |
| 1.2 | 1/12/2010 | AIIM OHS Officer | Review and update staff list |
| 1.3 | 13/7/2011 | AIIM OHS Officer | Minor changes |
| 1.4 | 25/01/2011 | AIIM Executive | Rewrite to include new buildings |
| 1.5 | 25/01/12 | AIIM Executive | Review |
| 1.6 | 7/08/12 | AIIM Executive | Update Staff list |
| 1.7 | 13/09/12 | AIIM Chief Operating Officer | Update Staff list |
| 1.8 | 8/01/13 | AIIM Executive Director | Review, update staff list, change definitions to comply with legislative changes |
| 1.9 | 13/01/14 | AIIM Chief Operating Officer | Review, update staff list, update to policy URL's |
| 1.10 | 24/02/15 | AIIM Chief Operating Officer | Review, update staff list, update to policy URL's, Update logo |
| 1.11 | 7/01/16 | AIIM Chief Operating Officer | Review, update staff list, update to policy URL's |

| | | | |
|---|---|---|---|
| 1.12 | 24/02/16 | AIIM Chief Operating Officer | Addition of dangerous goods/GHS data to comply with Deloitte DGHM audit |
| 1.13 | 4/05/16 | AIIM Chief Operating Officer | Update staff list. Rebranding |
| 1.14 | 6/10/17 | AIIM WHS Officer | Update staff list, review, add swipe to print information |

# APPENDICES

## APPENDIX I - Building and Floor Wardens

### BUILDING 231

#### Ground Floor

| | | |
|---|---|---|
| Joanne George | Laboratory and Safety Operations Officer | X3006 |
| Naomi Davies | AIIM Administrative Assistant | X3271 |
| Candace Gabelish | Chemical Procurement Officer | X1350 |

#### Level 1

| | | |
|---|---|---|
| Jonathan Knott | Research Fellow ISEM | X1424 |
| Germanas Peleckis | Associate Professor ISEM | X5728 |

#### Level 2

| | | |
|---|---|---|
| Peter Innis | Associate Professor IPRI | X3600 |
| Patricia Hayes | NMR Facility Manager IPRI | X5548 |

### BUILDING 236

| | | |
|---|---|---|
| Tony Romeo | Scanning Microscopist | X3258 |
| Azdiar Gazder | Research Fellow EMC | X5904 |

### BUILDING 235

#### Ground Floor

| | | |
|---|---|---|
| Paul Hammersley | Senior Technical Officer | X5130 |
| Rob Morgan | Technical Officer | X1422 |
| Pawel Wagner | Research Fellow IPRI | X1445 |

#### Level 1

| | | |
|---|---|---|
| Stephen Beirne | Research Fellow IPRI | X1537 |
| Delvene McKenzie | Administrative Assistant IPRI | X3127 |
| Phil Smugreski | Administrative Assistant IPRI | X1439 |

#### Level 2

| | | |
|---|---|---|
| Shulei Chou | APD Fellow ISEM | X1405 |

| | | |
|---|---|---|
| Narelle Badger | Assistant to Executive Director | X3530 |
| Yunxiao Wang | Research Fellow ISEM | X702985 |
| David Cortie | Research Fellow ISEM | X4815 |

## APPENDIX II – First Aid Officers

### BUILDING 231

| | | |
|---|---|---|
| Joanne George | Laboratory and Safety Operations Officer | X3006 |
| Candace Gabelish | Chemical Procurement Officer | X1350 |
| Crystal Mahfouz | Administrative Officer ISEM | X5730 |
| Patricia Hayes | NMR Facility Manager IPRI | X5548 |

### BUILDING 235

| | | |
|---|---|---|
| Paul Hammersley | Senior Technical Officer | X5130 |
| Rob Morgan | Technical Officer | X1422 |

### BUILDING 236

| | | |
|---|---|---|
| Tony Romeo | Scanning Microscopist | X3258 |

## APPENDIX III - AIIM Facility Personnel

| **Name** | **Role** | **Extension** |
|---|---|---|
| Prof William Price | AIIM Executive Director | X8089 |
| Narelle Badger | Executive Assistant | X3530 |
| Naomi Davies | AIIM Administrative Assistant | X3271 |
| Mat Davies | AIIM Workshop & Process Facilities Manager | X3894 |
| Joanne George | AIIM Laboratory & Safety operations Manager | X3006 |
| Candace Gabelish | AIIM Procurement Officer | X1350 |
| Paul Hammersley | AIIM Senior Technical Officer | X5130 |
| John Wilton | AIIM Senior Technical Officer | X2544 |
| Robert Morgan | AIIM Technical Officer | X1422 |
| Crystal Mahfouz | ISEM Administration Officer | X5730 |
| Tony Romeo | Scanning Microscopist | X3258 |
| Phil Smugreski | IPRI Administrative Assistant | X1439 |
| Delvene McKenzie | IPRI Administrative Assistant | X3127 |
| Patricia Hayes | NMR Facility Manager | X5548 |

APPENDIX IV - AIIM Operations and Safety Committee Representatives

| | |
|---|---|
| Mat Davies | AIIM Workshop & Process Facilities Manager |
| Joanne George | AIIM Laboratory & Safety operations Manager |
| Narelle Badger | Executive Assistant |
| Tony Romeo | EMC Staff Representative |
| Peter Innis | IPRI Staff Representative |
| David Shepherd | IPRI Student Representative |
| Rafael Santos | ISEM Student Representative |
| Kristy Adams | UOW WHS Unit Representative |
| Pawel Wagner | IPRI Organics Representative |