

Risk Assessment for Research Projects

1. Purpose

The research project risk assessment and checklist is designed to assist postgraduate research students and staff in identifying and assessing hazards and developing a plan to manage risks associated in research undertaken within the Faculty of Science. It can also assist the unit in developing strategies on how risk is managed.

2. Scope

All research personnel including honours, postgraduate students, visiting researchers and staff should complete a Research Projects Checklist and Risk Assessment before commencing their research project.

3. References

PER-OHS-GUI-106.9 Risk Management Guidelines

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

4. Definitions

Risk – Probability or likelihood of adverse health effects, damage to equipment or property, dependant on the likelihood of exposure to a hazard

Risk Assessment – The overall process of risk analysis and evaluation; identifying and assessing hazards, controlling those hazards and reviewing controls to ensure they are effective.

5. Procedure

5.1. Discuss the Research Activities

Meet with your Supervisor and use the Research Activities Checklist (Appendix A) to identify and discuss the activities you expect to undertake during the course of your research with regards to their associated risks. The purpose of completing this checklist is to raise awareness on the types of hazards that might be involved in research activities and to aid the completion of a risk assessment and management plan.

Although, for example, the obvious risk in the School of Chemistry would involve the control of hazardous substances, other hazards such as manual handling, noise, thermal, biological and psychological stresses should also be considered. For further discussion on psychological hazards, see Appendix B.

5.2. Complete the Risk Management plan

Use the Research Activities Checklist to summarise key issues and develop a Risk Management Plan (Appendix C) specifying how to control medium to extreme risks. For further guidance on risk assessment and management consult the UOW Risk Management guidelines at -

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

A copy of the Project Risk Management plan should be submitted as part of the initial project report to the relevant postgraduate course co-ordinator.

5.3. Complete the Training Needs Analysis

The training need analysis should be completed in consultation with your Supervisor(s) and include: inductions; University OHS training or orientation programs; local area, laboratory and equipment specific training. When possible, include anticipated training dates and trainer for the training course. A copy should be kept by the trainee and the original submitted to Local School Safety Co-ordinator for inclusion into the School training needs plan.

A. Research Activities Checklist

The purpose of completing this checklist is to raise your awareness on the types of risk that might be involved in your research activities and to assist in the completion of a risk assessment and management plan.

Activities	Yes	No	Possible controls / Points to consider
What substances will you working with			
Hazardous substances			UOW Hazardous Substances Awareness training Correct PPE UOW ChemAlert training Access to MSDS Awareness of handling/storage/ disposal requirements in laboratory Health surveillance or monitoring requirements
Biological / Biohazardous materials			UOW Biosafety training Read the UOW Biosafety Manual Completed Biosafety Quiz Correct PPE Appropriate Vaccinations Spills Cleanup Waste Disposal
Ionising or non-ionising radiation			Radiation Safety Training Radiation Licence (staff) Exemption Licence (students)
Carcinogenic Compounds			Completed Notification to unit
GMOs, AQIS			On-line training Record keeping
What equipment will you be working with?			
NMR Facility			Completion of training with NMR manager
Mass Spectrometry Facility			Completion of training with MS manager
Medium – High Risk equipment (High voltage, pressure, temperature, noise, moving parts etc)			Training from competent personnel, nominated trainer Follow and competent in a documented safe work procedure Appropriate PPE
Sharps and needles			UOW guidelines
Boats, swimming, snorkelling			Swimming proficiency Boat handling training Dive register
Scuba equipment			Current certification
Compressed gases			Competent in using the documented safe work procedure
Cryogens			Competent in using the documented safe work procedure
Lasers			Laser Safety Training, Correct PPE
Where will you working?			
Laboratory within School of Chemistry			Completion of laboratory induction
Other laboratory on campus			Location hazards, completing induction for that area
On a field trip			Read UOW Field Activity guidelines Completion of Field Risk Assessment



Activities	Yes	No	Possible controls / Points to consider
Remote areas (in mobile phone range, nearest source of medical help, transport, first aid kit, site safety risks, who you are working with)			Read UOW Field Activity guidelines Completion of Field Risk Assessment Defibrillator in first aid kit for remote areas Consider need for Satellite Phone/EPIRB Emergency / Medical contingency plans
Overseas			Travel authority and insurance Documented itinerary and communicated to supervisor Check university and DFAT recommendations for travel to that country
Workshop			Qualifications for equipment
External sites			Induction to that site, awareness of hazards Completion of risk assessment for that site
Hostile environment (temperature – cold room, noise)			Appropriate PPE and SWP
How will you be working			
Sustained physical activity			Work schedule that involves regular rest breaks, drinks
Sitting or standing for long periods of time in positions that are straining			Work schedule that involves regular breaks
Using or transporting heavy and/or awkward weights			Manual Handling training
Under stress (work pressure, monotony, unsocial hours, external pressures/work)			Have a work plan Undertake a time management course Take time out to recharge
Who will you be working with			
Co-supervisor			Ensure all supervisors are involved in discussion of risks
Members of the public / volunteers			Completion of ethics requirements
Undertaking joint research			Awareness of intellectual property requirements Agreement in place with co-researcher or external party
Working out of hours or alone			Personal security – entering or leaving secure premises, following out of hours procedures, having a 'buddy' to work with
Working with computers			
Computer back up			Is data automatically backed up or plan a back up schedule Save work regularly, archive on other storage media (CD)
Sitting for periods greater than 30 mins at a time			Have work breaks incorporating stretches
Using computer for more than 4 hours a day			Completion of an ergonomic assessment
Virus protection			Ensure up to date
Other			
Special Considerations- pregnancy in the workplace, general health, allergy, disability			

Appendix B: Managing Stress and Depression

Working on a limited term project with outcomes which are very personal can produce anxiety and a stressful work environment. Some ideas on reducing stress may include:-

- Spend time preparing and planning your work. Careful planning may increase rates of success and a risk assessment can help with this.
- Understand that not all experiments or approaches will be successful. The nature of research is that sometimes it will not work
- Be ruthless in managing time
- Work hard early allowing time for write up and last minute experiments
- Keep a balance between work that is more likely to succeed and that which has high inherent risk
- Try to stay motivated at all times. Most people need to do 'soul work' occasionally , stuff you like doing best to stay motivated
- Take time out to recharge, that may be as simple as going for a walk or having a day off
- Understand yourself – tendency to depression can be inherited – if you come from a family with depression be aware of the symptoms
- Sleep deprivation is a good trigger for depression
- Develop a few trusting relationships – people with whom you can share problems
- Don't self medicate – SEEK PROFESSIONAL ADVICE – ASAP.

Student Declaration

I have considered all the risks associated with my proposed research. I have considered the likelihood and the consequences of an event occurring and identified the medium to extreme risks. As a result, I have detailed how I can reduce the likelihood of an event occurring and how I will respond should an event occur.

I have discussed this risk management plan with my Supervisor(s)

Signed: _____

Date: _____

Supervisor Declaration

I have worked with this student to ensure they are aware of all the risk associated with their proposed research. I have also discussed ways in which they can manage and mitigate the risk, including an identification of any further training needs.

I am satisfied that the management plan addresses the risks of undertaking this student's proposed research and am clear on how they will manage and respond to an event.

Signed: _____

Date: _____

Further Comments:

Training Needs Analysis

Name: _____ Supervisor: _____

The training need analysis should include inductions, University OHS training or orientation programs, local area, laboratory and equipment specific training. When possible include anticipated training dates and trainer for the training course. A copy should be kept by the trainee and the original submitted to School Safety Co-ordinator for inclusion into the School training needs plan.

Training Course	Yes	No	Trainer	Date
Faculty of Science " Working Safely in Science" morning	X		Various	
Local Area Induction	X		Local Safety Co-ordinator	On arrival
Staff on-line orientation program				anytime
EEO on-line for staff				anytime
Hazardous Substances in the Workplace and ChemAlert			OHS Unit	
Senior First Aid			External Provider	
Biosafety*			External Provider	
Ergonomics in the Workplace			OHS Unit	
Purchasing and Storing chemicals			Chemistry Local seminar	
Implementing OHS – A practical guide for Supervisors			OHS Unit	
Radiation Safety (Xray, Unsealed or Sealed sources)*			External Provider	
Solvent Decanting and use of Solvent dispenser			Chemistry local training	
Handling Liquid Nitrogen			Science local seminar	
Safe Work Procedure training			Science local seminar	
Risk Management, SafetyNet and Incident Reporting			Science local seminar	
Addressing Hazards and Risks in the Workplace			OHS Unit	
Assessing competency			OHS Unit	
Boat Safety			OHS Unit	
ChemAlert			OHS Unit	
Hazard & Incident Reporting			OHS Unit	
Manual handling and Back Care			OHS Unit	
OHS for Senior Managers and Academics			OHS Unit	
Safe Work Procedures			OHS Unit	
Gas handling				
Laser Safety				
Oxygen Administration (required by Divers)				

