TUS GENERIC RISK ASSESSMENT GUIDANCE

A Guidance Document prepared to support TUS Units (e.g. Faculties, Departments, Research Institutes, & Campus Companies) understanding and undertaking Risk Assessments

INTRODUCTION

This guidance document was prepared to communicate to management and staff the risk assessment approach TUS recommends for risk assessing generic work activities throughout the University.

Please note that a risk assessment is only effective if you and your staff act on it. You must follow through with any actions required and review it on a regular basis.

RISK ASSESSMENT GUIDANCE, PROCESS & TEMPLATE

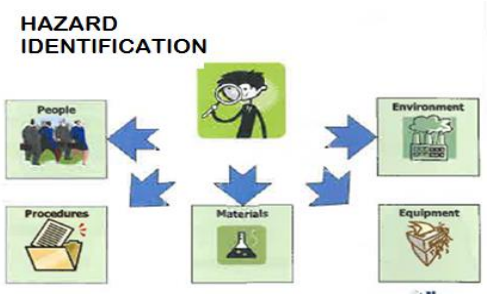
The following sections of this document present provide guidance on undertaking risk assessments for many of the generic work activities or tasks performed throughout TUS.
However, this guidance is not intended to cover specific or detailed requirements (e.g. legal requirements, regulations) associated with items such as Chemical Agents, Biological Agents or Compressed Gases, and in such cases where these hazards are identified, the reader should refer to the TUS Parent Safety Statement for further information on the associated TUS policies and requirements.
The steps below set out the process to follow to undertake a Risk Assessment for TUS generic work activities (e.g. operating equipment, organising an event, Student Tour of facility, etc…): -

Step 1 – Identify the Hazards

The recognised definition of a hazard is "Something with the potential to cause harm".
Consider what hazards are present in the work area (e.g. Laboratory) where the work activity is being performed, (e.g. the activity might be operating a piece of equipment).
The table below presents categories of hazard and examples of specific hazards under each category.

Category	Examples
Physical Hazards	*Manual Handling, Working at height, operating equipment, slips, trips, falls, fire, electricity, internal transport, housekeeping*
Health Hazards	*Noise, dust, lighting, vibration radiation, extremes of temperature ergonomics….*
Chemical Hazards	*Hazardous chemicals and substances*
Biological Hazards	*Viruses, bacteria, fungi*
Human Factors	*Young workers, pregnant employees, competence, lone working, supervision levels, stress, bullying and harassment*

Although a non-exhaustive list, it is useful in giving an individual enough information to know where to begin in identifying hazards. To ensure that as many hazards are identified as possible, look at all possible sources of information within the workplace (e.g. see the workplace Hazard Identification diagram below).



If, for example you are undertaking a risk assessment of a specific work activity in a new/refurbished facility/laboratory, the potential hazards may be numerous and so categorising them will support the Risk Assessment process.

Step 2 – Evaluating the Risk

The hazards associated with an activity can be common across many workplaces. For example, an employee climbing a ladder, will in many cases be exposed to a similar if not a common set of hazards. However the risk will vary for each use of the ladder depending on where it is used.

Two factors considered in the assessment of risk, are, i) What is the liklehood, or chance that a hazardous event will occour, for example the chance of an employee falling from the ladder while undertaking a particular activity, against ii) the severity, or extent of harm that may be caused if the event occours. For example, if the employee was to fall from the ladder, what would be the extent of the injury caused.

A common method for evaluating the risk is to use some form of matrix to put the liklehood and severity into perspective.

For more common hazards a simple qualitative 3x 3 matrix can be used to determine the risk classification. This system should be used for the majority of routine university risk assessments but other risk assessment techniques can be used which are more appropriate in certain circumstances, (Note: where there is a need to measure a greater variation of risk a more detailed matrix (e.g. 5x5) may be appropriate).

Definitions:

Hazard	Means anything that can cause harm, e.g. fire or electricity
Likelihood	a measure of the probability or chance of an event occurring
Severity	The consequence in the case of the event occurring. 3 levels of severity are applied in this matrix system from slightly harmful to extremely harmful
Risk	Means the chance, great or small, that something or someone will be harmed by the hazard.

Risk Matrix (3x3)

Severity / **Likelihood**	**Slightly Harmful** *(e.g. Superficial injury or temporary discomfort or distress)*	**Harmful** *(e.g. Sprains, minor fractures, ill health leading to disability)*	**Extremely Harmful** *(e.g. major fractures, amputations, fatality, life shortening illnesses)*
Highly unlikely	**LOW (L)**	**LOW (L)**	**MEDIUM (M)**
Unlikely	**LOW (L)**	**MEDIUM (M)**	**HIGH (H)**
Likely	**MEDIUM (M)**	**HIGH (H)**	**HIGH (H)**

The 3 basic steps to Risk Assessment are:

1. Identify the hazards
Anything that has the potential to cause harm, in terms of human injury or ill-health. For example working with chemicals, dangerous substances or dangerous equipment.

2. Identify who can be affected and the level of risk for each hazard
Decide who could be harmed and how, giving consideration to vulnerable groups e.g. young persons, the elderly, pregnant employees, shift workers etc.
(I.e. the chance/likelihood of harm occurring, coupled with how severe the harm or ill health could be).

3. Identify the controls or improvements that need to be put in place to avoid or reduce the risk. Your control measures are the most significant part of the risk assessment, as they set out the steps that must be followed to protect people. Some control measures may already be in place. You will need to decide if additional measures are needed. Risk assessment will help you prioritise the high risk hazards first.

Step 3 – Control Measures Explained

Having evaluated the risks, we need to establish what controls are required to reduce the risk to as low as is reasonably practicable.
A control measure is simply what steps you are going to take to remove a hazard (eliminate) or at least reduce it to a low level (minimise). Your control measures are the most significant part of the risk assessment, as they set out the steps that must be followed to protect people.
Some control measures may already be in place. You will need to decide if additional measures are needed.
When deciding on the controls, you should consider the 'general principles of prevention', which are a hierarchy of controls that set out how to manage hazards.
The focus should be to get rid of the hazard, so that people are protected. If this is not possible then you should work through the principles until you have made it as safe as reasonably practicable. Your reliance on personal protective equipment (PPE) should be one of the last steps in the process (not the first).
The General Principles of Prevention are summarised as follows;

1. **Eliminate or Avoid the risk**
   If you can get rid of the hazard then people are not exposed to the risks. You should apply this principle first.

2. **Evaluate unavoidable risks**
   If you can't get rid of a hazard, you must assess it. This requires you to evaluate the level of risk presented by the Hazard *(i.e. the Probability of the Event Occurring x Severity of Harm caused).*

3. **Combat the risks at source**
   Deal with the hazard at its root, e.g. if there is a noisy machine in the workplace, giving employees hearing protection is not dealing with the root of the problem, but If you enclose the machine with sound proofing or if you replace the machine with a quieter one, then you are combating the risk at source.

4. **Adapt the work to the individual**
   This is the principle of arranging the workplace and tasks to take into account your employees and to reduce the effect of work on health.

5. **Adapt your work place in line with technical progress**
   Safer systems of work are always being developed. You should keep up to date with new systems, so that you can put them into use in your workplace.

6. **Replace dangerous systems with safer alternatives**
   This applies to dangerous articles, substances or systems of work. For example, if you are using a solvent that may be toxic, then you should consider if there is a non-solvent alternative that is safer.
   (Note: Basic approach - if you can take steps to make it safer, then do it.)

7. **Give priority to collective protective measures**
   It is better to put controls in place that protect everyone, rather than just handing out PPE to employees.

8. **Develop a prevention policy**
   Set out how you are going to protect your employees and other people from the hazards in your workplace. This forms part of your safety statement.

9. **Give training and instruction**
   Once you have assessed the risks and decided on your controls in line with the principles above, you will need to tell your employees about them and to make sure that they are competent to work safely.

Step 4 – Responsibilities for Risk Assessment, Monitor and Review

All TUS Unit Managers (e.g. Unit Managers, Deans, Heads of Departments and Campus Company managers) are responsible for ensuring their departments undertake and complete the risk assessment process for identified hazards associated with activities and areas coming under their management control.
Managers should complete the process with the support of their staff. The risk assessments process will immediately benefit from a greater range of experience and judgement when all departmental staff are engaged in the process.
In this way managers and staff can review and better understand the gaps in tasks in relation to health and safety and can both agree on necessary controls.
Once the assessments are complete, record the significant findings and what control measures were put in place to reduce the risk. Identify and record those who are responsible for ensuring control measures are in place and for maintaining the risk to the tolerable level.

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TUS Risk Assessment

Assessment by:		Date:		Revision:	

Hazard & Associated Risk Identification	
Hazard:	
Persons at Risk:	

	Absolute Risk				Resolute Risk		
Risk	L	S	Rating	Existing Controls	L	S	Rating

Further Controls Required			
Number	Description	Responsible	Due Date

Risk Rating Matrix					
	Likelihood				
Severity	Very Unlikely	Unlikely	Likely	Very Likely	Almost Certain
No Injury/trivial Injury (does not require first aid)	Very Low	Low	Low	Medium	Medium
Minor injury (basic first aid required, not HSA reportable)	Low	Low	Medium	Medium	Medium
Serious Injury/illness/disease (GP/Hospital visit required, reportable to HSA)	Low	Medium	Medium	Medium	High
Major injury/illness/disease (requires emergency medical treatment, long term absence)	Medium	Medium	Medium	High	High
Disabling Injury/disease, terminal illness, Death	Medium	Medium	High	High	Very High

Risk Acceptance Level	
Very Low	No Action – record risk assessment
Low	Record risk assessment – review at a later date
Medium	Record risk assessment – bring rating to low if possible.
High	Stop activity and seek further advice. Bring rating to low/medium.
Very High	Activity is not permitted to proceed.

References

1. Health and Safety Authority: managing Health and Safety in Schools: http://www.hsa.ie/eng/Education/Managing_Safety_and_Health_in_Schools/Interactive_Risk_Assessments_%E2%80%93_Primary/Tool-4-Risk-Assessment-Templates.pdf

2. Health and Safety Authority: Risk Assessments made easy: http://www.hsa.ie/eng/Small_Business/Getting_Started/Risk_Assessments_Made_Easy/

3. Health and Safety Executive UK: Example risk assessments: http://www.hse.gov.uk/risk/casestudies/