Health, Safety and Wellbeing (HSW) Risk Assessment

Document No:	1	**Assessment Date:**	
Faculty/ Service Division:	Faculty of Engineering	**School/Department :**	Mechanical Engineering
HSW Risk:			
Form completed by:	Conrad Scherb Callan Loomes	**Responsible Line Manager:**	Luke Hallum

Signed (Student)**:**	Conrad Scherb, Callan Loomes	**Signed** (Supervisor)**:**	
Dated:	31 Mar 2022	**Dated:**	

Other Risk Assessments which might also be required:	☐	☐	☐

Description of activity and/or location:	Working on computers either from private locations or in the Brain-Computer Interface lab (405-836C). Testing of participants using a series of flashing images in the same locations.

Version: Risk Assessment Template v2
Issue Date: 15 November 2016

Identify Hazards and Control the Risks:

1. An activity may be divided into tasks. For each task identify the hazards and associated risks. Also list the possible scenarios which could sooner or later cause harm.
2. Determine controls necessary based on University standards, legislation, codes of practice, AS / NZ standards, manufacturer's instructions etc.
3. List existing risk controls (take credit for what you do)
4. Rate the risk once all controls are in place using the matrix in
5. List any additional controls that need to be implemented and take action
6. Communicate the findings

The boxes will resize to suit your situation/the amount of text you need to use – press tab after last cell to create new rows

Task sequence	Hazard	Who may be harmed and how	Existing controls	Current Risk Rating (L)Likelihood x (C)Consequence = (R)Rating			Additional Controls required
				L	C	R	
Gathering of test data	Epileptic seizures caused by flashing test images.	Volunteers helping us gather data for our test set to train our model		1	3	3	- Conduct background check on participants to check if they are epileptic or seizure prone. - Warn participants them of risks beforehand via a message on the testing images.
Gathering of test data, working on project.	RSI, back strain and other related injuries from sitting/typing too long	Us as the researchers		2	1	2	- Take regular breaks while working on the project tasks & code.

Version: Risk Assessment Template v2
Issue Date: 15 November 2016

Any in-person activity	Spread of COVID-19	Anyone at UoA including ourselves	- Scanning in with the COVID-19 tracer app, testing with RAT tests if symptomatic, must be vaccinated, masks must be worn for all in-person activities - Must not have COVID-19 symptoms in order to enter the lab - Masks should be worn all time. other persons - Hand sanitisation and washing stations are available upon entry and exit of the lab. - All in-person personal must be fully vaccinated and hold a valid My Vaccine Pass.	3	2	6	- Limit testing to one participant at a time. - Limit face to face exposure during testing.
In person activities	Slips/trips/falls	Staff, academic visitors, students	- Follow the standard precautions in the lab and working environments.	1	1	1	
Noise exposure	Damage to hearing	Staff, academic visitors, students, particularly around noisy computers undergoing intense simulations.	- Ensure users are separated from noisy machinery when in use.	1	1	1	

Fire risk/overheating with running computers.	Fire risk or heat stroke/burns.	Staff, academic visitors, students	- Follow standard practice and precautions in place. - Avoid working in closed areas when computers are running.	1	3	3	

Action Plan						
Management agreed additional control measures to be implemented	**Resources Required**	**Action By:**			**Action Complete: Responsible Line Manager**	
		Responsible Person	**Target Date**	**Completion Date**	**Signature**	**Date**
Add a disclaimer before any test data with regards to flashing lights and a seizure warning.	Disclaimer needs to be created and applied before test data.	Callan and Conrad	28 June 2022 (Before Testing)			

Review	
Review Details	**Comments**
Scheduled Review Date	
Are all control measures in place?	
Are controls eliminating or minimising the risk?	
Are there any new problems with the risk?	
Are the supervisory arrangements adequate?	
Are the levels of skills, capabilities and training adequate?	
Review By: (name)	

Version: Risk Assessment Template v2
Issue Date: 15 November 2016

Review Date:	

Communication				
	Method	**Yes**	**Date**	**Comments**
Reference of formal communication to staff	Copy of risk assessment issued to staff			
	Controls covered in team procedure issued to staff			
	Staff handbook issued to staff			
	Other			
How they were consulted on the risk	Health, Safety and Wellbeing Committees			
Additional Methods of Communication	Induction			
	Toolbox Talk			
	Team Meeting			
	Email circulation			
	Other			

HSW Risk Assessment Matrix						
Likelihood Level	4	**Very likely** Probably expect the event to occur in most circumstances	Moderate (4)	High (8)	Extreme (12)	Extreme (16)
	3	**Likely** Event likely to occur at least once over the coming year	Moderate (3)	High (6)	High (9)	Extreme (12)
	2	**Possible** Event may occur at some time	Low (2)	Moderate (4)	High (6)	High (8)
	1	**Unlikely** Occurrence is conceivable, but not expected to occur	Low (1)	Low (2)	Moderate (3)	Moderate (4)
			Minor	**Moderate**	**Major**	**Severe**
			1	**2**	**3**	**4**
			Consequence level			
Consequence description		**Harm to People** Potential for injury or death	None or trivial / negligible injury (no or slight injury which requires localised first aid)	Minor injury (illness or injury is not serious, medical treatment required)	Serious injury (serious injury or illness, hospitalisation required)	Fatality, major injury (death, permanent disablement, or significant long-term illness)
		People Affected Extent of people potentially affected	None or few (e.g. 0 to 2)	Small numbers (e.g. 3 to 10)	Moderate numbers (e.g. 10 to 50)	Wide scale (e.g. more than 50)
		Reputation and Legal Potential for publicity with a negative impact on reputation / potential for legal prosecution	None or issue raised by staff or students and resolved promptly by management None or legal dispute – found not guilty – fines up to $3 million (Body Corporate), $600,000 (Officer)	Internal scrutiny to prevent escalation and short-term stakeholder concern Minor non-compliance, limited notification to regulators / affected stakeholders	Medium-term stakeholder concern, national media scrutiny and 'brand' impact Medium non-compliance, moderate notification to regulators / affected stakeholder,	Persistent stakeholder concerns, international media scrutiny and long term 'brand' impact Significant non-compliance, extensive notification to regulators / affected stakeholders, potential for

Version: Risk Assessment Template v2
Issue Date: 15 November 2016

				potential for legal proceedings / fines	legal proceedings / imprisonment / fines
	Operations Extent of ability to maintain core business	None or business interruption < 4 hours None or effectiveness and efficiency of a service, programme or project impacted in the short term None or slight damage to property or equipment	Business interruption between 4 hours to 5 days Operational disruption manageable by workarounds Moderate damage to property or equipment	Business interruption > 5 days Medium operational impact resulting in delay of key deliverables Major damage to property or equipment	Business interruption of many weeks Breakdown of key activities and significant long-term impact Massive damage to property or equipment
	Environment Extent of negative impacts on the environment	None or minimal impact None or clean up expenses up to $25,000	Minor short-term or intermittent impact, able to be contained with specialist assistance Clean up expenses up between $25,000 to $1m	Serious, medium-term detrimental impact Clean up expenses up between $1m - $5m	Very serious, long-term or permanent damage Clean up expenses > $5m

Consider the Likelihood

How often is the task done? Has an accident happened before (here or at another workplace)? How long are people exposed? How effective are the control measures? Does the environment affect it (e.g. light, temperature, space)? What are people's behaviours (e.g. stress, panic, deadlines)? What people are exposed (e.g. disabled, young students, etc.)?

Consider the Consequences

What type of harm could occur (minor, serious, death)? Is there anything that will influence the severity (e.g. proximity to hazard, person involved in task, etc.)? How many people are exposed to the hazard? Could one failure lead to other failures? Could a small event escalate?

Calculate the Risk

The final score for each risk is calculated by multiplying the likelihood and consequences response scores. This will give a risk score of between 1 and 16.

All risks rates as "High" or "Extreme" require detailed analysis of mitigating practices / controls to determine the residual risk rating. **Action must be taken.**

"Low" and "Moderate" risks may be excluded from further analysis (other than when the consequence may be severe). However the rationale for excluding these risks should be documented to demonstrate the completeness of analysis undertaken. **Some action may be required.**

Other than in the most unlikely circumstance, risks that can cause major or severe harm to people have been determined as "high" or "extreme". Management review is considered appropriate for risks of these nature due to the potential magnitude of the impact, even though the likelihood may be assessed as relatively low.

Risk Priority - Legend

Extreme (12-16)	**Intolerable risk.** Immediate action(s) is to be taken by Faculty/Service HSW risk owners - including DVCs, Deans of Faculties, Directors of Services, Academic Heads/PIs, Services Managers. Work should not be started or continued until the risk has been reduced to as low as reasonably practicable using the hierarchy of risk controls. The Associate Director Health, Safety and Wellbeing, and Manager Risk and Performance must be advised of the risk for their review. The risk should be included in the UoA wide risk register.
High (6-9)	**Should not be tolerated.** Urgent action is to be taken by the immediate manager. Work should not be started or continued until the risk has been reduced to as low as reasonably practicable using the hierarchy of risk controls. The HSW Manager working with the Faculty/Service, and Manager Risk and Performance must be advised of the risk for their review. To be included in the UoA wide risk register.
Moderate (3-4)	Management to **monitor risks** in case changing circumstances increase the level of risk. Some action may be required, e.g. improving controls.
Low (1-2)	**Requires no further attention** above routine practices and procedures, apart from monitoring.

Note: This proposed Health and Safety Risk Assessment Matrix aligns with WorkSafe NZ guidance, UoA Resilience Management Plan, UoA Risk Determination Matrix, UoA TVRA and UoA Incident Levels