

HS928**Equipment design and modification checklist****UNSW**
SYDNEYReference: [HS728 Design and Modification Guideline](#)

If you design or modify equipment at UNSW you become the designer and have legal responsibilities. This checklist can help to identify hazards and how they are controlled. If you are unsure of any questions, discuss this with workshop experts.

Date		Name		zID	
Contact email & phone				Supervisor name	

Project and job type

Research	Y/N	Project/course name	
Teaching	Y/N	Laboratory	
Postgraduate thesis	Y/N	Room	
Undergraduate thesis	Y/N	Project Code	
Other:		Fund Code	

Detail of item/plant/equipment

Brief project description:	
Brief description of item/plant/equipment:	
Attached to/associated with another piece of equipment:	
Design drawings/manual available: <i>(if applicable)</i>	
How to clean/maintain the item: <i>(if applicable)</i>	
How to dismantle/decommission the item: <i>(if applicable)</i>	
How to dispose/recycle the item: <i>(if applicable)</i>	

Compliance

List reference documentation used for the safe design

Legislation:	
Australian Standard(s):	
Technical Standard(s):	
Codes of Practice(s):	
Professional Body advice:	
Does it require plant design registration:	

Approval process*:

Supervisor signature		Date	
Workshop signature		Date	
Workshop job no. <i>(if applicable)</i>			

*Large jobs may require lab manager approval

Equipment design and modification considerations:

To be completed by staff/student/designer				
Hazard	Y/N	Controls / Comments	Workshop check	Considerations
Electricity used or generated				Earthing or shielding needed / Protection of leads & cables / Overload of electrical circuits / Refer to AS3000
Pressure above/below atmospheric				Gases under pressure/ Fluids under pressure/ High pressure. Refer to AS4343 if $P(\text{Mpa}) \times v (\text{litres}) > 300$
Chemicals used in or generated by equipment				Chemical compatibility / Containment / Workplace exposure standards / Hazardous spill control / Decontamination
Gas used in or generated				Asphyxiant / flammable / toxic gas / gas detection sensors & alarms / automatic shut-off
Fumes/dust generated				Capture systems / Filters / Cleaning / Workplace exposure standards
Ionising radiation used with or generated				Approval from Radiation Safety Committee
Non-Ionising radiation used with or generated				Approval from Radiation Safety Committee
Biological material used with or generated				Containment / Hazardous spill control / Gene Technology Research Committee / Quarantine Material / Decontamination
Fire/ explosion hazard				Fire suppression / Smoke detection / Fire extinguisher
Temperature $>40^{\circ}\text{C}$ or $<0^{\circ}\text{C}$				Guarding / Enclosures / Fire prevention / Embrittlement
Equipment supports $>10\text{kg}$				Collapse / Load bearing
Equipment weight $>10\text{kg}$				Manual handling
Moving parts				Guarding / Emergency stop controls / Ejected parts/ Falling parts / Pinch hazards /Entanglement / Unexpected movement / Awkward postures
Noise/vibration				Noise $> 80\text{dBA}$ / Damping / Sound enclosures
Exposed sharp edges or points				Guarding
Ergonomics				Controls within easy reach / Task lighting / Warning signage / Maintenance access
Environment				Environmental risks / Power saving options / Waste management
Other:				

Risk Management Form/Safe Work Procedure to be completed or updated before item is put into service.