Imperial College London

EVENTS OFFICE: Activity overview and risk assessment

1. LEAD DEMONSTRATOR		
Name	Title / Position	Faculty / Department / Section
Rebecca Stewart	Lecturer	Dyson School of Design Engineering Faculty of Engineering
2. PERSON COMPLETING OVERVIEW / RISK ASSESSMENT (if different from above)		
Name	Title / Position	Faculty / Department / Section
Rohil J Dave	Student	Dyson School of Design Engineering Faculty of Engineering

3. ACTIVITY TITLE
Make a Zero Waste Shirt with E-textiles workshop

4. OVERVIEW OF ACTIVITY If the activity is a demonstration or workshop, please describe in detail what is involved (do not cut-and-paste the marketing pitch from Events website)		
Type:	Talk / Demonstration only ☐	Audience participation involved ☒
Description	Up to 10 adult participants will take part in the workshop. Participants will be working to create their own individual zero waste shirt and participate in a focus group discussion evaluating the fit and comfort the garment. The group will assist each other in recording the appropriate body measurements to create a custom shirt pattern, drawing the pattern on fabric, cutting the fabric into the pattern pieces and using domestic sewing machines to construct the garment. The workshop will also introduce how to do basic integration of e-textile sensors into clothing. Participants will be bringing their own laptops and connecting to Arduino-like boards which then connect to conductive textiles. Domestic sewing machines and clothing irons will be available for the textile work, but the participants will not be doing any soldering. The workshop will be facilitated by Rohil J Dave and Becky Stewart and assisted by two PhD students. The workshop is broken into two sessions with 1) first session focused on overview, measurement taking, pattern making and sewing basics and start of sewing segment and 2) second session dedicated to progressing with sewing the garment till finished and evaluation discussion.	
Date of event	10 and 14 May 2024	

5. LOCATION OF THE ACTIVITY (Complete as relevant)					
Campus	South Kensington	Building	ACE	Exact Location	ACEX 151 Mezzanine
Location not on College premises (describe)				Location type (e.g. lab, marquee, public space)	Workshop lab benches

6. DECLARATION (Please complete as appropriate)

Confirm that this activity does not present any significant hazard ☒	If you CANNOT confirm this, then you must complete the risk assessment overleaf. If you CAN confirm that there are no significant hazards associated with the activity, then please enter details below and forward the form directly to the Events Office. **(see Guidance Notes on Page 4)**

Name	Date
Rohil J Dave	25 Apr 2024

Risk assessment

1. HAZARD SUMMARY
(each identified hazard must then be detailed in Section 2 below)

Moving machinery	☒	Public areas	☐	Genetically-modified Micro-organisms	☐
Lifting, carrying or pulling	☒	Explosions or implosions	☐	Non- GM biological agents	☐
Sharps	☒	Noise	☐	Live animals	☐
Electrical	☒	Extreme hot or cold items	☒	Laboratory animal allergens	☐
Working at height	☐	Pressure/steam	☒	Flammable substances	☐
Falling objects	☐	Naked flames	☐	Chemicals hazardous to health	☐
Environmental factors (terrain, water, weather)	☐	Cryogenic liquids	☐	Emotive or security issues	☐
Slips, trips or falls	☒	Compressed gasses	☐	Ionising Radiation	☐
Traffic	☐	Travel	☐	UV/lasers/microwave/ other non-ionising radiations	☐
Other					

2. Brief description of the hazardous aspect of the activity	Precautions (controls)	Emergency Actions	Is risk high, medium or low?
Moving sewing machines, clothing iron and workshop materials from Dyson Building to ACE Building	A trolley will be used to move the machines and materials across campus. Trolley will be moved by at least two individuals together, never alone. Only the workshop facilitators will move the machinery and materials.	First aid kit will be available for any small cuts or abrasions encountered. The nearest first aid kit is on 151 mezzanine by the sink. Local first aiders (Ingrid Logan, Claudia Morgan, and Chloe Allen-Greeves) will be present in the ACE workshop for assistance. If further assistance is needed there is an internal phone which can be used to contact security on ext. 4444 or by mobile on 020 7589 1000. Any accidents, incidents or near-misses will be reported on SALUS.	low
Lifting and carrying sewing machines and clothing irons up stairs to mezzanine (no lift access) and trips and falls when carrying these items	Approx. weight of sewing machine is 6.5 kg and is a manageable weight to be carried by one person up the stairs. Only the workshop facilitators will be moving the machinery. Only one sewing machine will be moved at a time, individual will not attempt to move more than one machine in one go. Individual will maintain firm grip and stability of the sewing machine while moving up/down stairs with one hand on the built-in handle and one hand supporting underneath the machine. Machine will be held between shoulder height and elbow height level and individual will not raise machine to level near or above	First aid kit will be available for any small cuts or abrasions encountered. The nearest first aid kit is on 151 mezzanine by the sink. Local first aiders (Ingrid Logan, Claudia Morgan, and Chloe Allen-Greeves) will be present in the ACE workshop for assistance. If further assistance is needed there is an internal phone which can be used to contact security on ext. 4444 or by mobile on 020 7589 1000. Any accidents, incidents or near-misses will be reported on SALUS.	low

	head height. Another individual will accompany the lifter/carrier to open doors.		
Use of sewing machines and clothing irons	Sewing machines and clothing irons used are domestic and in good working order. All machines used are CE marked. Any damage or faults to machines reported to owner and taken out of service until repaired. Machines will be powered by mains socket. Visual inspection will be carried out before each session to verify good working order of appliance itself, cable, plug and mains socket. Workshop facilitators include individuals with lots of experience using sewing machines (possessing fashion degrees) and will and test machines and the set up to ensure it is safe to operate. Irons will also be tested to ensure steam level is normal and in good working condition Facilitators will provide demonstrations to participants individually before allowing use of machines.	Any accidents, incidents or near-misses will be reported on SALUS.	low
Abrasions and cuts when operating sewing machine (needle through finger), using scissors to cut fabrics (scissor blade cut hand), and using pins during sewing (pins prick through finger/hand)	Participants will use machines and tools only under direct supervision of workshop facilitators. Only good working condition fabric-only scissors will be used for cutting fabrics. Pins will be kept in designated box and area. Participants will be instructed to replace pins back to box immediately after finished using them on a step-by-step basis during the sewing segment. Regular checks will be carried out by workshop facilitators to ensure no loose pins are left lying around on tables or floor, returning them to the designated box if found. As a precaution, large cutting mats from ACE workshop will be used under the fabric pieces during cutting to prevent damage (nicks and scrapes) to tables.	First aid kit will be available for any small cuts or abrasions encountered. The nearest first aid kit is on 151 mezzanine by the sink. Local first aiders (Ingrid Logan, Claudia Morgan, and Chloe Allen-Greeves) will be present in the ACE workshop for assistance. If further assistance is needed there is an internal phone which can be used to contact security on ext. 4444 or by mobile on 020 7589 1000. Any accidents, incidents or near-misses will be reported on SALUS.	low
Burns and fire hazard from using clothing iron	Participants will use machines and tools only under direct supervision of workshop facilitators. Irons will not be left on unattended. After each session, irons will be allowed to cool down (minimum ten minutes) before storing/moving. Before each session, participants will be made aware of exit routes the event of an evacuation.	Any burns will be immediately treated with cold water and burns kit. The nearest burn kit is outside technicians' office on 151 ground floor. Removal of the power source i.e. unplugging cable from mains socket. Any accidents, incidents or near-misses will be reported on SALUS. For evacuation, the nearest assembly point is point B – Aero Car park. The	low

		point can be reached by going back through 151 ground floor entrance or through the far end exit of 151 mezzanine leads to staircase straight to point B. Refer to ACE-Extension-GEEP.pdf	
Electrical shock from using Arduino-like boards	Arduino-like boards are powered via laptop through USB connection. Laptop will not be plugged into mains during use. Electronics parts being used all use low voltage and low direct current posing minimal danger and potentially mild discomfort.	Removal of the power source i.e. unplugging the USB lead from laptop. Any accidents, incidents or near-misses will be reported on SALUS.	low

3. Who might be harmed?

Presenter only ☐	Audience plus presenter ☒
Support staff ☒	Other ☐ Describe:
If audience participation is involved, do any participants need to be excluded e.g. children?	Only adults in attendance

4. Describe the waste disposal routes for any hazardous or contentious items

N/A

5. How often is the activity to be carried out?

Two 4 hour sessions

7. REVIEW & SIGN OFF (Refer to matrix below)

Name	Position	Date
If activity is to take place on the premises of a host organisation, confirm that the organisation been provided with a copy of this risk assessment and that no objections have been raised		☐
If activity is to take place in a public location, confirm that any relevant permissions have been obtained.		☐

REVIEW & SIGN-OFF MATRIX

The matrix below describes the minimum review and sign-off requirements for the risk assessment in relation to the type of activity being undertaken

Activity Description	Local Safety Officer*	College Safety Department	Estates Facilities	Host Organisation	Local Authority or any other relevant body
Carried out by College staff on College premises	✓		✓ if taking place in non-Faculty space		
Carried out by College staff on the premises of another organisation	✓			Acknowledgement that the risk assessment has been provided to the host organisation	
Carried out by College staff in a public location	✓				Acknowledgement that necessary permissions have been obtained (where relevant)
Carried out by a visiting organisation on College premises		✓	✓ if taking place in non-Faculty space		

*Local Safety Officer refers to Faculty Safety Manager, Campus Safety Manager or Departmental Safety Officer. See http://www.imperial.ac.uk/safety/who-we-are/local-safety-staff/ for a current list of Local Safety Officers.

Note: The College holds Employers and Public Liability Insurance that covers events organised by the College. It is not therefore necessary for the College Insurance Manager to sign-off individual activity assessments.

GUIDANCE NOTES

The College has a responsibility to undertake risk assessments before we engage in any activity that may present a risk of injury of ill health to both our own staff and others who may be affected by our activities e.g. members of the public.

1. Completed forms must be returned promptly to the Events Office to avoid delays and allow plenty of time for review and sign-off by the relevant stakeholders. Reviewers require a minimum of two weeks prior to the event.

2. A degree of judgement will be required in determining whether the risk assessment section requires completion. Straightforward lectures or simple demonstrations requiring minimal equipment are unlikely to present any significant hazard that warrants recording. In general, if any of the hazards in Section 1 of the form are identified, then it is likely that the risk assessment section will require completion.

3. It must be absolutely clear from the form where the activity is to take place. If it is off-site (particularly in a public place), then this may present additional challenges and arguably heightens our liabilities.

4. Activities involving hazardous substances must as a minimum record:

    a. The name of the substance, the hazards presented (including any Hazard Statements or Workplace Exposure Limits).
    b. The quantity being handled (this has a direct bearing on the consequences should something go wrong).
    c. Consider any transport issues (both within College premises and outside). If hazardous substances are taken outside the College, they may fall within the scope of the transport of dangerous goods regulations. There may also be insurance implications if private vehicles are used for business purposes.

d. Consider what precautions need to be in place to prevent exposure (including PPE).
e. Consider any waste disposal issues.
f. Consider emergency procedures including spillage control and first aid.

The precautions only need to be proportional to the type and quantity of substance involved.

5. Precautions need to be realistic. If a source of running water is required in the event of an eye splash, a source must be readily available. If a spillage can be envisaged, the materials to deal with it need to be at hand. If hazardous waste is generated (including that from a spillage clean-up) it needs to be disposed appropriately – this may involve getting it back to the laboratory in the first instance. These issues can become more problematic when working off site. It is not uncommon to see risk assessments where text is cut—and-pasted from the safety data sheet without consideration as to whether the necessary means are actually available or workable.

6. The issues covered in points 4 & 5 can broadly be applied to biological agents.

7. Remember to consider the risk of transmitting/being infected by COVID-19 as part of your assessment.

8. Any activities involving radioactive sources need to be approved by the Departmental Radiation Protection Officer or the Safety Department Radiation protection team.

9. Consider any lone working issues. Can a lone worker manage the task on their own (particularly if something goes wrong)?

10. Consider what documentation and ID needs to be carried if working off-site, particularly in public places. If College staff are challenged, they will need to demonstrate that the activity is legitimate and that any necessary permissions have been obtained.

LINKS:

Events: https://www.imperial.ac.uk/advancement/advancement-operations/institutional-events/
Running an event: https://www.imperial.ac.uk/events-and-hospitality/
Imperial Festival: http://www.imperial.ac.uk/festival
Prevent Duty: https://www.imperial.ac.uk/admin-services/secretariat/secretariat/what-we-do/prevent/