School of Science
and Engineering
University of Dundee

PERSONAL RISK ASSESSMENT FOR STUDENT PROJECTS

PLEASE READ THIS FIRST

Each student who undertakes a large or significant project such as a final year project is required to complete this Risk Assessment form. The nature of some projects is such that students could be required to make use of specialised laboratory spaces, specialised equipment, or even hazardous materials; and these need to be considered in terms of risk and safety. The nature of these risks is likely to be Discipline-specific. However, all project students must identify and assess any such risks involved in their project **BEFORE** commencing with the activities where risk is involved. It is recognised that circumstances can sometimes change during a project, and this may influence the outcome of the Risk Assessment. Regardless, a Risk Assessment must be completed at the *beginning* of the project, and this should be done based on what is known or can be reasonably anticipated at that moment in time. If the project circumstances change later, the risks can be reassessed, and a revised Risk Assessment can be submitted at that time. In all cases, students should ensure that they liaise with their project supervisor / advisor to discuss their Risk Assessment. The project supervisor / advisor will be required to review and (electronically) sign the Risk Assessment form too. Project work is not particularly dangerous, but it is important to realise that, in your future, professional career you may have a legal obligation to think carefully about any hazards which may be encountered. This awareness encourages careful working, and it makes sure that everyone will be sure that the necessary precautions have been identified and are being applied. The first stage of safe working is that you think carefully about what you are planning to do.

WHAT YOU NEED TO DO

Please review and complete all sections below which are relevant to your Discipline and to the needs of your project. Please liaise with your project supervisor / advisor in doing so. Both you and your supervisor / advisor should (electronically) sign this form prior to submitting it.

Section 1 – Your Details

YOUR NAME	Preslav Chonev
STUDENT ID	180007405
NAME OF SUPERVISOR	Dr Jacky Visser
TITLE OF PROJECT	AC40001 Individual Project Advanced Physical Computing

Section 2 – Emergency Procedures

This section is primarily for information only. Please make sure that you are familiar with the following information which relates to emergency procedures, personnel, or resources within your primary location of work on campus, i.e., the Queen Mother Building.

ITEM	Details

Nearest Telephone for Emergency Help and Number to Ring	**Emergency Phone Number: …4141…….** **Phone locations:** Ground Floor of QMB: • Phone situated in Room G21 (User Centre, off QMB Street Area). First Floor of QMB: • Phone situated within Room 1.13 (Lab 5 – Honours/MSc Lab). Second Floor of QMB: • Phone situated in Room 2.08 (User Experience Lab) • Phone situated in Room 2.01 (staff room and kitchen area).
Trained First Aiders	Iain Murray
Fire Assembly Point	Campus green outside the front entrance of the QMB
Nearest First Aid Equipment	QMB Ground Floor: • First Aid Kit available on top of white plinth(s) opposite Room G.03 (Lab 0) QMB First Floor: • First Aid Kit available on red mailbox cabinet opposite meeting room 1.06 QMB Second Floor: • First Aid Kit available within Room 2.01 (staff room and kitchen area).

Section 3 – Your Specific Location(s) for Project Work

Please specify the location(s) where you will be undertaking work on your project. In some cases, you may be working from home. In other cases, you may be working in the Queen Mother Building, utilising specific lab spaces such as the main labs, the Arduino lab, and lab areas provided by research groups. In the table below, several common work locations have been prefilled to give you an example to start with. You can delete any that do not apply to you and/or or add more as appropriate.

For each location, please specify any special safety facility which you need to use, e.g., an isolated electrical supply, a 'fume' cupboard, etc. The nature of these is likely to be Discipline-specific and may not be relevant to you. For example, if you are simply working on a PC or laptop in a lab area or at home, there are likely to be no special facilities required, other than you making safe use of the equipment and to be aware of relevant health- or fire-safety procedures.

LOCATION OF WORK	Date(s) /Period Utilised	Special Facility Required
Online / at home	Project duration	None
Queen Mother Building Labs (any of Labs 0, 1, and 2 on the ground floor, or Labs 4 and 5 on the first floor).	Project duration	None
Arduino Lab, Ground Floor, Queen Mother Building	Project duration	None
UX Lab, Second Floor, Queen Mother Building	Project duration	None
DJCAD building	Project duration	None
Library maker space	Project duration	None

Section 3 – Risk Categories

Please review the categories of risk below. Please note once again that these are likely to be Discipline-specific. Whilst these are not often applicable to students within the Discipline of Computing, please seek advice from your project advisor if you are unsure. For example, where it states Electrical Risks, this is likely to be primarily relevant for students in Electrical and Electronic Engineering degrees. However, those doing Arduino-style projects should check with their project advisor in case any special requirements apply. Mechanical risks are likely to be primarily relevant for students in Engineering degrees, working with larger equipment. However, if you are working with specialised equipment and not sure, please check with your project adviser once again. One area to consider for Computing could be for students developing wearable products or making use of Virtual Reality. In such cases, you may wish to consider the safety of the working environment. For example, in the case of VR, making sure that the VR kit is set up in an area with plenty of space for moving, with no sharp objects that people could bump into, or cables that they could trip over. Having reviewed the risk categories in the table below, there is a separate box / table underneath into which you can list any risks you have identified. You should stipulate the dates/duration for which this risk could present itself during your project. You should also describe how the risk will be managed / mitigated. For example, in the case of using VR equipment, making sure that sufficient space around the kit is made available, being aware of people developing motion sickness using the kit, making sure that any cables are safely placed around the boundary of the area and not trailing elsewhere.

3.0 ELECTRICAL RISKS. Identify electrical risks and indicate the precautions to be taken in the boxes further below.
4.0 MECHANICAL RISKS. List any mechanical risks which you will encounter. Include the lifting of heavy weights, the use of hand or power tools and the use of pressurised systems.
5.0 THERMAL RISKS. Identify risks from equipment or substances which will be at high or low temperatures.
6.0 RISK from DUST and POWDER. Identify risks of fire, explosion, or injury by contact/breathing from dust or powder.
7.0 RISK from CHEMICALS or GASES. List each chemical substance you use which you consider to offer a significant risk, the date when you first knew you would use it, the risks associated with it and the precautions to be used. Risks are listed on containers, in manufacturer's data sheets and catalogues, and are usually known to research workers and members of staff. Please also ensure COSHH forms are completed if required.
8.0 RISK from BIOLOGICAL Hazards. List biological substances which you use and consider to offer a significant risk, the date when you first knew you would use it, the risks associated with it and the precautions to be used. Risks may be listed on containers, in manufacturer's data sheets and catalogues, and are usually known to research workers and members of staff. Please also ensure COSHH forms are completed if required.
If you have identified any risks from the categories above which are relevant to your project, you can list these below along with precautions that will be taken.

RISK	Date	Details and Precautions
Electrical	17/11/2021	Using electrical equipment so chance of failure. Using components from reputable sellers and following safety guidelines when using set electronic tools. To protect from fault equipment, will carry out visual inspections of the equipment and attached devices. Defective equipment will be labelled as such and not used.
Electrical	17/11/2021	When working with Arduino family components will use inline fuses to protect Arduino component from it being damaged.
Mechanical	18/11/2021	Use of power tools and potentially heavy equipment. Will wear appropriate clothing and protective gear. Will only use equipment after training

Physical	19/11/2021	To avoid physical discomfort while working with tools that can cause harm when miss-used, seats will be always provided. Additionally working time will be watched and breaks will be provided to avoid exhaustion.
Thermal	18/11/2021	Use of electrical equipment may lead to increase of heat. Will use equipment safely and within bounds of use.
Chemical	19/11/2021	When working with tools which could release toxic fumes, will operate as instructed and while within university ground will communicate with advisor if a piece of equipment seems unsafe to use.
Thermal / Chemical	19/11/2021	Prior to using equipment which can cause fire/fume releasing will ensure working space is tidy and no flammable items are kept close the working area.

Section 4 – General Health and Safety, including Display Screen Equipment

This section is applicable to all students, notably those in the Discipline of Computing who will make heavier use of Display Screen Equipment for the purposes of their project, e.g., computers, monitors, laptops, and similar devices. All students should ensure that they comply with the following:

1. Please read "A Student's Guide to Health and Safety at Dundee University"[1].
2. Please be aware of the risks of using Display Screen Equipment for prolonged periods of time and the importance of having an ergonomic workspace to prevent repetitive strain or injury. See brief guides for this at Science Daily[2] and the BBC[3] but please seek further information where required.
3. In general, please be mindful of your health, both physical and mental. Please seek further information on these where required. Some examples:
   a. Guidance for the public on the mental health and wellbeing aspects of coronavirus (COVID-19)[4].
   b. Live Smart pages from the University of Dundee[5].

Section 5 – Declaration and Signatures

Please complete the following section before you submit your Risk Assessment form. Please note that electronic signatures are OK. You do not need to print out the form to sign it.

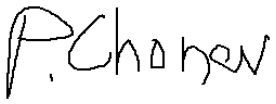
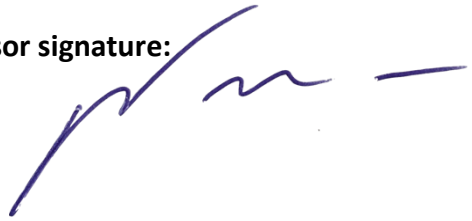
[1] https://www.dundee.ac.uk/media/dundeewebsite/safetyservices/documents/handbook/Student%20Handbookv3%202010.pdf

[2] https://www.sciencedaily.com/releases/2020/07/200728150637.htm

[3] https://www.bbc.com/worklife/article/20200508-how-to-work-from-home-comfortably-ergonomic-tips-covid-19

[4] https://www.gov.uk/government/publications/covid-19-guidance-for-the-public-on-mental-health-and-wellbeing/guidance-for-the-public-on-the-mental-health-and-wellbeing-aspects-of-coronavirus-covid-19

[5] https://libguides.dundee.ac.uk/c.php?g=664589&p=4702841

DECLARATION	Your Signature and Date
I have given careful consideration to the work that I am planning to do, and I believe that I have identified the significant risks to which I will be exposed. I have consulted my project supervisor / advisor where I have been uncertain about safe working practices during my project. I confirm that I have read "A Student's Guide to Health and Safety and Dundee University". I confirm that I am aware of the risks associated with the use of Display Screen Equipment and the importance of having an ergonomic workspace for preventing repetitive strain or injury. I confirm that the above is to the best of my knowledge and relevant at the date of signature.	**Student Signature:**  **Date: 19/11/2021**
I have read this document and agree that the risks associated with this project have been identified and appropriate measures are in place. This is to the best of my knowledge and relevant at the date of signature.	**Supervisor / advisor signature:**  **Date: 19/11/21**