

## UNIVERSITY OF BATH HEALTH AND SAFETY STANDARD

### Use of Display Screen Equipment

Version Number	Version 1	Date of Approval	13-09-2016	Review Date	Three years from acceptance by UHSC
Author and Lead	Amanda Chapman				
Aims	The purpose of this standard is to provide a means of assessing the hazards which arise from display screen equipment in order to reduce the risk of injury to employees. This should, in turn, reduce the level of sickness or injury and the risk of civil action in respect of back injury, eye strain, headaches or other musculoskeletal problems.				
Scope	<p>This standard applies to all University provided fixed and portable display screen equipment used by “users” in the course of their employment. This includes any such equipment used by Postgraduate research students (who are classed as employees for the purposes of this standard) or agency workers who are working under the control of the University.</p> <p>This standard applies to University employees who are contracted to work from other premises (such as <b>homeworkers</b>) or who are using display screen equipment provided by other organisations (e.g. when working as a display screen equipment user at another employer’s premises). Ad hoc home working is not covered by this standard although it is recommended that employees follow the University’s guidance on safe set up and use of Display Screen Equipment.</p> <p>This standard does not apply to display screen equipment provided for short-period use only, such as display screen equipment associated with some research equipment (e.g. display screens associated with electron microscopes) nor does it apply to equipment provided for undergraduate and postgraduate taught student use. However, in these cases the general requirements for risk assessment will apply and the minimum requirements for computer workstations should be observed so far as is reasonably practicable.</p>				
Relevant Legislation	The Management of Health and Safety Regulations 1999 The Health and Safety (Display Screen Equipment) Regulations 1999 (DSE Regulations). Supported by HSE Guidance to the Regulations Publication L26.				
Definitions	<b>User:</b> means any worker (employee or postgraduate research student or agency worker) who habitually uses display screen equipment as a significant part of their normal work.				
	<p><b>Eye and eyesight test:</b> This is a ‘sight test’ as defined by legislation and includes a vision test and an eye examination. For computer users, the test should take their work into account. Computer users are entitled to ask their employer to provide an eye and eyesight test. The University has <a href="#">arrangements</a> for reimbursing relevant users for the cost of this test, and for contributing to the cost of glasses if they are required specifically for computer use. Agency workers at the University are excluded from this provision as their employing agency is responsible for these costs.</p>				
	<b>Rest Break:</b> Rest breaks are short (5-10 minutes per hour) breaks away from the computer to rest the eyes and get up from their workstation. The computer user may perform other work tasks during this time.				
	<b>Local Workstation Assessor:</b> Faculties, Departments, teams etc. may informally appoint one or more staff members to undertake assessments or monitor self-assessments for groups of staff and research students. These individuals will be confirmed as local assessors once they have undertaken the relevant training provided by UHSE. A list of current local workstation assessors can be found on the <a href="#">UHSE wiki</a> .				
	<b>Display Screen Equipment (DSE):</b> is a device or equipment that has an alphanumeric or graphic display screen, regardless of the display process involved; it includes both conventional display screens and those used in emerging technologies such as laptops, touch-screens, smart phones and other similar devices.				

	A <b>workstation</b> includes display screen equipment such as a monitor, keyboard, mouse, telephone, modem, printer, chair, desk and the immediate working environment.		
	<b>Portable IT equipment</b> includes any portable DSE and all ancillary equipment used with it such as laptop stands, earphones, capacitance pens, etc.		
	<p><b>Home workers</b> are those individuals who work at home by formal agreement with the University either as stated in their contract of employment or as a long-term reasonable adjustment under the Equality Act 2010. Where an assessment identifies that equipment or software is required in order to achieve an ergonomically safe workstation set up, it is the responsibility of the employing School, Faculty, Department or Directorate to provide this.</p> <p>Individuals who choose to work from home on an occasional basis are excluded from this definition, although it would be prudent for them to follow the standard so far as they are reasonably able.</p>		
Responsibility for implementation	Deans, Heads of Departments, Directors and Line managers. Individual users also have responsibility for implementing aspects of this standard that relate to their use of their workstation.		
Training availability:	<p>Guidance notes and a toolkit are available via the Staying Safe and Well website.</p> <p>UHSE provides training for local workstation assessors.</p> <p><a href="#">Self-serve training is available online for all DSE users</a></p>		
Standard to meet:		Accountability	Reference documents and more information
<b>DSE work at workstations (including the regular use of portable IT equipment and workstations used by contracted homeworkers)</b>			
1	Work stations meet the minimum legal requirements as described in the guidance notes, below.	Deans, Heads of Departments and Directors	<a href="#">Minimum legal requirements are tabulated below</a>
2	A Display Screen Self- Assessment is completed for each user at the start of a role or whenever there is a substantial change to the workstation including a change of location.	Line Managers	<a href="#">UHSE provides a standard self-assessment pro forma</a>
3	Where issues are identified these are directed, in the first instance, to the Line Manager (or an appropriate Local Workstation Assessor where appointed) for resolution.	Line Managers	
4	Where Issues cannot be resolved by local management these are escalated to UHSE.	Line Managers	<a href="#">Assistance should be sought from UHSE especially where there is a musculoskeletal difficulty or other health condition that may affect the way a person is able to use their workstation</a>
5	<p>Control measures identified by the self-assessment process (and any subsequent assessment by local management and/or UHSE) are implemented. These should include any required:</p> <ul style="list-style-type: none"> <li>Physical adaptations to the workstation (e.g. changes to chairs, desk layout, provision of ancillary equipment for laptop use, etc.)</li> <li>Changes to working practices (taking of appropriate screen breaks, alternating tasks etc.)</li> <li>Changes to office environment (e.g. provision of blinds, changes to lighting etc.)</li> </ul> <p>Changes to homeworking environment (such as changes to lighting etc.) are specifically excluded from this requirement. If a safe set up cannot be achieved then consideration may be required as to whether home working should be permitted.</p>	Line Managers, Users	<a href="#">The Risk Assessment Guidance and UHSE wiki provides advice and guidance on all aspects of the workstation environment to enable appropriate control measures to be identified and implemented.</a>
6	Workstation assessments are reviewed at least annually. This may need to be done more frequently if a related issue (for example, back or wrist pain) occurs.	Line Manager / User / local DSE assessor where present	

<b>Ad hoc homeworking falling within the scope of this standard</b>			
7	Guidance and training is available to enable users to safely set up and use home workstations.	Head of UHSE	<p>The <a href="#">Risk Assessment Guidance</a> and <a href="#">UHSE wiki</a> provides advice and guidance on all aspects of the workstation environment to enable appropriate control measures to be identified and implemented.</p> <p>Users may wish to complete the <a href="#">generic self-assessment</a> for their home workstation.</p>
<b>Assistive Technology</b>			
8	Users requesting the assistance of the Assistive Technologist are expected to have completed a self-assessment and provided this to UHSE.	Line Manager / User	This helps to ensure that the causes of problems have been correctly identified so that the most effective remedies can be put in place.
<b>Standard Monitoring and Measurement Criteria</b>			
Departmental audits will include a check of local arrangements for DSE assessment. This will include checks of at least 5 DSE self-assessments and any related follow up. This will include a sample of self-assessments completed for new recruits.			
1	DSE self-assessments are available		
2	Significant findings from DSE assessments have been followed up		
3	Control measures identified in DSE assessments have been implemented		
4	Where a department employs home workers, there is a process to ensure that home workers' computer equipment meets the requirements of this standard, and that the process is followed and recorded.		

**COMPUTER WORKSTATION ASSESSMENT CHECKLIST AND RECORD SHEET**

<b>NAME</b>	
DEPARTMENT	
ROOM	
JOB TITLE	
DATE	

The workstation user or an appointed assessor, in conjunction with the user, should complete this checklist. If the answers to any of the questions are NO then the workstation and/or work practices may not comply with the requirements of the Health and Safety (Display Screen Equipment) Regulations. Your supervisor may need to take action to bring your workstation up to the required standard.

	Type 'yes' or 'no' in boxes below
<b>PROBLEMS</b>	
Are you free from aches and pains associated with the use of display screen equipment? If No, please give brief details below.	
<b>Comments:</b>	
<b>SEATING</b>	
Does your chair provide adequate support for your back & buttocks?	
Does your chair have sufficient seat pan depth?	
Does your chair have a five castor base & is it stable during use?	
Does your chair swivel to allow easy access to the workspace?	
Can your chair be adjusted for height & does the mechanism work?	
Does your chair have arms?	
If your chair has arms, do they prevent you from sitting close enough to your workstation?	
<b>Comments:</b>	
<b>SEATING POSITION</b>	
Is your keyboard & screen in front of you while working (so that you do not have to twist your neck and back)?	
When seated are your forearms parallel to the desktop & your elbows level with the middle row of keys?	
When looking at your screen are you looking slightly downwards (about 10-20°), so that you do not strain your neck muscles)?	
Is there sufficient space to stretch your legs while seated?	
Can you place your feet flat on the floor while working?	
If you cannot place your feet flat on the floor while working, have you been provided with an adjustable footrest?	
<b>Comments:</b>	
<b>DISPLAY SCREEN</b>	
Is your display screen adjustable for tilt and swivel?	
Is your display screen adjustable for brightness & contrast?	

Is your display screen image clear, stable & free from flicker?	
Is your display screen free from glare & reflections?	
Are the characters clear and readable?	
<b>Comments:</b>	
<b>KEYBOARD AND MOUSE</b>	
Does your keyboard have a shallow slope to it (about 10-15°)?	
Does your keyboard have a separate numeric pad?	
Is your keyboard free from glare & reflections?	
Is your mouse positioned as close as possible to the keyboard?	
Is your mouse suitable for use with your dominant hand?	
<b>Comments:</b>	
<b>DESK</b>	
Is your desk free from glare & reflections & stable during use?	
Is there sufficient clearance on the underside of your desk for comfort?	
Is the height of your desk sufficient for comfort?	
Is your desk deep enough & wide enough for the work that you do?	
Is there sufficient space in front of your keyboard to support your wrists & forearms (about 100 mm)?	
<b>Comments:</b>	
<b>OFFICE ENVIRONMENT</b>	
Is the lighting suitable & sufficient during both daylight & night time hours?	
Have blinds been fitted to the windows?	
If blinds have not been fitted to the windows, is this satisfactory?	
Is the noise generated in your work area acceptable?	
Is the space in the work area sufficient for the number of persons & the equipment & furniture provided?	
Does the air feel comfortable?	
Is there sufficient circulation of air?	
<b>Comments:</b>	
<b>WORKING PRACTICES</b>	
Do you have periodic changes of activity away from the display screen (5-10 minutes in each hour)?	
Do you use keyboard shortcuts to minimise mouse use?	
<b>Comments:</b>	
<b>SOFTWARE</b>	
Is your computer & software sufficient for the tasks you undertake?	
Have you been given suitable training for the software that you use?	
<b>Comments:</b>	

## Risk Assessment Guidance

This guidance identifies potential health hazards associated with the use of computer workstations, in particular desktop computer equipment. There are similar hazards associated with the use of portable equipment and further guidance is available on the [UHSE wiki](#).

#	Hazards	How users may be affected	Required controls & measures
1	Eye strain	Computer users may suffer eye strain after prolonged periods of work. This is an uncomfortable condition, but not permanent.	<ul style="list-style-type: none"> <li>• Clear screen image which is free from glare</li> <li>• Work to be managed so that screen users have periodic changes of activity: 5-10 minutes away from the screen each hour should suffice. This may happen without planning, if the user needs to answer the phone and field enquires during the working day <ul style="list-style-type: none"> <li>○ It is possible to install software that pops up at pre-set intervals to remind the user to take a break. This can be useful for some individuals, although may be irritating to others.</li> </ul> </li> </ul>
2	Eyesight defects	There is no evidence that computer use can cause eye sight to deteriorate such that glasses are needed. However, the visual demands of computer use may make users aware of eyesight defects that they had not noticed beforehand.	<ul style="list-style-type: none"> <li>• Employees who are habitual users of computer can have an eyesight test; paid for by their department. They can have this test: <ul style="list-style-type: none"> <li>○ When they first start work</li> <li>○ Periodically thereafter – follow the advice of the optician</li> </ul> </li> <li>• Employees who need glasses specifically &amp; solely for computer use can have them paid for by their department. (The monetary contribution made is equivalent to the cost of a “basic” pair).</li> </ul>
3	Triggering a photo epileptic attack	Most people with epilepsy are unaffected by computer use. Most people with photo epilepsy are unaffected by computer use for business applications – usually flickering lights and striped patterns are the trigger	<ul style="list-style-type: none"> <li>• Computers restricted to business use only; games (which are more likely to generate flickering images) are not permitted</li> <li>• User to report any problems with computer screens or software that causes problems related to photo epilepsy</li> <li>• Individual instances will be assessed to identify additional control measures</li> </ul>

#	Hazards	How users may be affected	Required controls & measures
4	Muscular or skeletal disorders caused or exacerbated	<p>Computer users can suffer MSD or can exacerbate existing MSD problems due to:</p> <ul style="list-style-type: none"> <li>• Poor workstation ergonomics</li> <li>• Repeated repetitive movements (such as continuous mouse use)</li> <li>• Existing MSD conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Computer workstations to meet the minimum legal requirements (see below)</li> <li>• Individual assessments to be completed for each habitual user / computer workstation.</li> <li>• Ergonomic or other shortcomings to be addressed by the department. Assistance is available from UHSE.</li> <li>• Assessments to be repeated after changes in user / workstations. Assessments to be repeated periodically.</li> <li>• Staff to receive training on the safe use of computer equipment.</li> </ul>
5	Stress	<p>Computer users may suffer from stress. However, this usually arises from a combination of workload and personal factors and is not directly caused by the computer.</p> <p>Computers can contribute to stress:</p> <ul style="list-style-type: none"> <li>• Inadequate software or hardware</li> <li>• Inadequate training to use software or hardware</li> </ul>	<ul style="list-style-type: none"> <li>• Suitable software and hardware provided</li> <li>• Changes to software or hardware to be managed and communicated effectively to minimise stress</li> <li>• Identify requirements for training and refresher training and make suitable provisions <ul style="list-style-type: none"> <li>○ Training is available from Computing Services for most of the software packages used widely across the campus</li> </ul> </li> <li>• Channels available for staff to report stress and for the University to implement remedial action. Consult the University Stress Policy and associated guidance documents.</li> </ul>

## MINIMUM REQUIREMENTS FOR WORKSTATIONS

### Equipment

#### Display screen / monitor

Screen	<ul style="list-style-type: none"> <li>Swivel and tilt easily and freely to suit the needs of the operator or user.</li> <li>Free of reflective glare and reflections liable to cause discomfort to the operator or user.</li> </ul>
Screen height	<ul style="list-style-type: none"> <li>Height adjustable or use an adjustable table (monitor rest).</li> </ul>
The image on the screen	<ul style="list-style-type: none"> <li>Stable, with no flickering or other forms of instability</li> </ul>
Characters on the screen	<ul style="list-style-type: none"> <li>Easy to read</li> </ul>
Brightness and contrast	<ul style="list-style-type: none"> <li>Easily adjustable</li> </ul>

#### Keyboard

The keyboard	<ul style="list-style-type: none"> <li>Separate from the screen and tiltable so that the operator or user can find a comfortable working position and avoid fatigue in the arms or hands.</li> <li>Matt surface to avoid reflective glare.</li> <li>Arrangement and style should mean it is easy to use.</li> <li>The symbols on the keys should be easy to read in use.</li> </ul>
Space in front of the keyboard	<ul style="list-style-type: none"> <li>Sufficient to provide support for the hands and arms of the operator or user.</li> </ul>

#### Work desk or work surface

The work desk or work surface	<ul style="list-style-type: none"> <li>Large enough to allow a flexible arrangement of the screen, keyboard, documents and related equipment.</li> <li>Low-reflectance surface.</li> </ul>
Space	<ul style="list-style-type: none"> <li>Adequate for operators or users to find a comfortable position.</li> </ul>
If used, the document holder	<ul style="list-style-type: none"> <li>Stable and adjustable, and positioned to minimise head and eye movements.</li> </ul>

#### Work chair

The work chair	<ul style="list-style-type: none"> <li>Stable and allows the operator or user easy freedom of movement and a comfortable position.</li> <li>The seat should be height adjustable.</li> <li>The seat back should be adjustable in both height and tilt.</li> </ul>
Footrest	<ul style="list-style-type: none"> <li>Shall be made available to any operator or user who wishes to use one.</li> </ul>

### Environment

#### Space requirements

The workstation	<ul style="list-style-type: none"> <li>Dimensioned and designed so as to provide sufficient space for the operator or user to change position and vary movements.</li> </ul>
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### Lighting

Any room lighting or task lighting provided	<ul style="list-style-type: none"> <li>Ensure satisfactory lighting conditions and an appropriate contrast between the screen and the background environment, taking into account the type of work and the vision requirements of the operator or user.</li> </ul>
Disturbing glare and reflections on the screen or other equipment	<ul style="list-style-type: none"> <li>Prevent by co-ordinating workplace and workstation layout with the positioning and characteristics of light sources.</li> </ul>

### Reflections and glare

Workstations	<ul style="list-style-type: none"> <li>Designed so that sources of light including windows, and brightly coloured fixtures or walls cause no direct glare and no distracting reflections on the screen.</li> </ul>
Windows	<ul style="list-style-type: none"> <li>Fitted with a suitable adjustable covering to attenuate the daylight that falls on the workstation.</li> </ul>

### Noise

Noise emitted by equipment belonging to any workstation shall be taken into account when a workstation is being equipped, to minimise distraction and disturbance.

### Heat

Equipment belonging to any workstation should not produce excess heat which could cause discomfort to operators or users.

### Radiation

All radiation with the exception of visible light shall be reduced to negligible levels.

### Humidity

An adequate level of humidity shall be established and maintained.

### Interface between computer and operator/user

In designing, selecting, commissioning and modifying software, and in designing tasks using display screen equipment, the employer shall take into account the following principles:	
Software	<ul style="list-style-type: none"> <li>Suitable for the task, easy to use and, where appropriate, adaptable to the level of knowledge or experience of the operator or user; no quantitative or qualitative checking facility may be used without the knowledge of the operators or users;</li> </ul>
Systems	<ul style="list-style-type: none"> <li>Must provide feedback to operators or users on the performance of those systems;</li> <li>Must display information in a format and at a pace which are adapted to operators or users;</li> </ul>
Software ergonomics	<ul style="list-style-type: none"> <li>The principles of software ergonomics must be applied, in particular to human data processing.</li> </ul>