

Electrical Safety Policy

November 2021

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Version Control History

Version Number	Date of Change	Summary of Revisions Made
1	November 2016	A new Procedure that outlines responsibilities and key principles for how the risk from electricity at work will be managed.
1.1	December 2018	Change of role to Quality Manager and update other job titles to adhere to the new structure.
1.2	April 2020	Change of footer to reflect version status, change of owner, lead author, lead editor and next review date. 5.2 Insert - Ensure the Estates Department are informed of any update to the electrical appliance register including type, identification/serial number if appropriate, date of acquisition, place of use, etc and when any item is being disposed of.
1.3	November 2021	Removal of para 2.4, covered in 5.8.1. Amendment to para 4.6, Key Principles to provide clarity. Amendment to para 5.2, change Head of Estates to Estates Dept, 5.2. point 5, clarify competence. Para 5.7 amended to clarify no staff to work on high voltage systems. Minor detail changes to titles and contact details. Removal of Ref to list in para 5.9, retitled para 5.10 to 5.9.

Electrical Safety Policy

1 Purpose

The College is required so far as is reasonably practicable under the Health and Safety at Work etc Act 1974 to ensure the health, safety and welfare of its employees, students and others affected by its activities. This policy sets out the college's position with regard to electrical safety and the specific requirements of the Electricity at Work Regulations 1989, and other associated legislation.

This document will outline responsibilities and also how the risks from electricity at work will be managed.

2 Scope

- 2.1 This policy applies to all employees, (including homeworkers), contractors, volunteers, members of the public, students and others working or representing on the College's behalf that may be affected by the College's use of electricity and/or electrical equipment.
- 2.2 It also applies to all activities associated with electricity when contractors undertake works at any College premises.
- 2.3 It applies to fixed electrical installations including ICT installations on College owned premises and portable electrical equipment.

3 Definitions

- 3.1 **Fixed Installations:** Fixed installations are the wires and circuitry that supply the sockets, lights etc in a building, and the equipment wired directly to the fixed installation eg woodworking machinery, air conditioning units, hand driers etc.
- 3.2 **Portable Electrical Equipment:** Portable electrical equipment is any electrical device that is connected to a fixed installation by means of a flexible cable and a plug eg kettles, toasters, microwaves, fridges, washing machines, tumble driers, power tools, ICT equipment eg PCs, laptops and battery chargers, projectors, and sound/audio equipment.
Note: The term portable is interchangeable for the word transportable eg a domestic type fridge would be deemed transportable electrical equipment.
- 3.3 **Hand-Held Appliance:** Portable equipment intended to be held in the hand during normal use eg hairdryer, power drill, soldering iron.

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- 3.4 **Authorised Person:** A member of staff employed by the College to give consent to contractors and/or employees to inspect, service and maintain electrical installations and equipment including ICT equipment/installations eg Head of Estates, ICT Manager.

This will include lecturing staff/technicians instructing students as part of their course work.

- 3.5 **Competent Person/s:** A person who possesses sufficient technical knowledge, relevant practical skills and experience for the nature of the electrical work to be undertaken and is able at all times to prevent danger and, where appropriate, injury to themselves and others.

- 3.6 **Danger:** Risk of injury to persons (and livestock where expected to be present) from:

- 1 Fire, electric shock and burns, arcing and explosions arising from the use of electrical energy, and
- 2 Mechanical movement of electrically controlled equipment, in so far as such danger is intended to be prevented by electrical emergency switching or by electrical switching for mechanical maintenance of non-electrical parts of such equipment.

- 3.7 **Isolation:** A function intended to cut off for reasons of safety the supply from all, or a discrete section, of the installation by separating the installation or section from every source of electrical energy.

- 3.8 **Fault:** A circuit condition in which current flows through an abnormal or unintended path. This may result from an insulation failure or a bridging of insulation.

- 3.9 **Residual Current Device:** A mechanical switching device or association of devices intended to cause the opening of the contacts when the residual current attains a given value under specified conditions.

- 3.10 **Live/Line Conductor:** A conductor or conductive part intended to be energised in normal use, including a neutral conductor but, by convention, not a PEN conductor (**PEN conductor is a conductor combining the functions of both protective conductor and neutral conductor**).

- 3.11 **Voltages:** The following ranges of nominal voltage (rms for ac) are defined:

- a Extra low voltage – Not exceeding 50V AC or 120V ripple-free DC, or less.
- b Low voltage – exceeding extra low voltage, but not exceeding 1000V ac or 1500V dc between conductors, or 600V ac or 900V dc between conductors and earth.
- c High voltage – normally exceeding low voltage.

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4 Key Principles

The College will ensure:

- 4.1 Training and instruction is given where appropriate, together with the provision of safety devices, equipment, instruments and tools to carry out electrical work in a safe and proper manner.
- 4.2 Risk assessments are in place and controls measures implemented that reduce the risk of injury where electricity is used and/or electrical equipment is used so far as is reasonably practicable.
- 4.3 That there are arrangements/resources in place to inspect, service and maintain electrical installations and electrical equipment so as to prevent danger to persons from fire, electric shock, burns, arcing and explosions.
- 4.4 Electrical Equipment is suitable for the purpose and environment to which it is intended to be used.
- 4.5 Procedures for managing accidents/incidents on College premises involving electricity will be in place and reviewed.

No employee is permitted to engage in a work activity on or so near a live/line conductor without the approval and appropriate Permit to Work from the Estates Department.

5 Responsibilities

The organisational structure for the implementation and management of the College's statutory health and safety duties are described in detail in the Health and Safety Policy.

It is the responsibility of all persons who may be concerned with the operation of, or work upon, the electrical systems and equipment of the College to conform with this policy.

Staff who do not comply with this policy may be subject to the College's disciplinary procedures.

Specific duties relating to this policy are detailed below.

5.1 Head of Human Resources and Organisational Development

It is the responsibility of the Head of Human Resources and Organisational Development to review and update this policy and ensure an EIA is carried out on this policy.

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5.2 Heads of Departments, Sector Development Directors and Managers

It is the responsibility of all Heads of Departments, Sector Development Directors, and Managers to:

- Ensure that their staff are aware of this Policy.
- Ensure compliance with the Policy.
- Contact the Estates Department for any electrical works that may be required ie installations, repairs or maintenance, for advice, information on location of asbestos, isolation of systems etc.
- Ensure that risk assessments for their area/s of responsibility are carried out and that they are monitored and also reviewed annually.
- Ensure their staff who inspect, service and/or maintain electrical equipment (this includes IT systems/equipment) are competent and have the appropriate qualifications and experience.
- Ensure the Estates Department are informed of any update to the electrical appliance register including type, identification/serial number if appropriate, date of acquisition, place of use, etc and when any item is being disposed of.
- Contact the Estates Department for advice to ensure that all electrical equipment supplied for their members of staff to use and is suitable for the environment in which it will be used and also suitable for the tasks for which it will be used eg for construction related works then 110V or battery operated equipment would be deemed suitable.
- Ensure that staff that operate/use electrical equipment are competent to do so.
- Ensure that any waste materials are disposed of correctly eg fluorescent tubes, fridges etc – seek advice from Estates Department.

5.3 Head of Estates

Head of Estates will ensure:

- That this policy is brought to the attention of any contractors he/she engages to conduct College business.
- That any work involving electrical systems (installations, repairs, maintenance), will be undertaken using qualified, competent persons, and that risk assessments and/or safe systems of work/method statements are in place and that these are implemented, monitored and reviewed for all electrical works under their control. This includes both contractors and Estates employees.
- That there are arrangements in place to inspect, service and maintain electrical installations as is necessary to prevent danger.
- That there are arrangements in place to inspect, service and maintain electrical equipment wired directly to the fixed installation eg woodworking machinery, air conditioning units, hand driers etc.

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- That there are arrangements in place to inspect, service and maintain portable electrical equipment as is necessary via the risk assessment process.
- That every work activity, including the operation, use and maintenance of electrical systems and work near systems, shall be carried out in such a manner so as not to give rise, so far as is reasonably practicable, to danger.
- That there are procedures in place to dispose of electrical equipment as per The Waste Electric and Electronic Equipment (WEEE) Regulations 2013.

5.4 Human Resources

Human resources will:

- In conjunction with the Health, Safety and Wellbeing Advisor arrange training as is necessary.
- Advise and support managers on disciplinary and other proceedings when required.

5.5 Occupational Health Provider

The College Occupational Health Provider will:

- Carry out health surveillance/health checks as agreed with HR.
- Advise the employee to attend their GP for referral onto specialists when necessary.

5.6 Health, Safety and Wellbeing Advisor

The Health, Safety and Wellbeing Advisor will:

- Provide information, advice and guidance on electrical safety to employees/students as is necessary.
- Identify appropriate training for employees in conjunction with HR (CPD) when requested.
- Advise employees on electrical risk assessments and suitable control measures.
- Advise Estates department on suitability of contractors risk assessments and method statements and contractors competence.
- Investigate accidents/incidents involving electricity and produce a report for SMT.

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5.7 All College Employees

- Shall familiarise themselves and comply with this policy.
- No employee shall work on/use or repair/alter/modify any electrical system or electrical equipment unless authorised or instructed to do so by an authorised or competent person and then only if they have the appropriate knowledge, skills and training to work on/use that particular electrical systems or electrical equipment. **This includes reading and understanding any risk assessments for that activity.**
- No employee shall work on high voltage.
- No employee shall work on live electrical installations including equipment connected to it eg woodworking machinery, air conditioning units, hand driers etc unless it is absolutely necessary and that **ALL** the conditions in regulation 14 of the EAWR 1989 are met, in addition specific risk assessments must be in place, and the guidance in the HSE's publication HSG 85 must be followed. This includes the live testing requirements of BS7671.
- No employee shall work on live electrical equipment, this includes fault finding and diagnostic work, unless there are specific risk assessments in place for the activity, the equipment is connected to the mains power supply via a RCD and all test equipment is of an approved BS/EN standard. The guidance in the HSE's publications must be followed ie HSG85, EIS35/36, GS38.
- Employees shall make regular visual checks regarding the integrity of electrical equipment they use including supply cables to ensure no undue wear or damage has been sustained and immediately report any concerns to the Estates Department (PCEstates@uhi.ac.uk).
- Employees shall **not** use or allow to be used any electrical equipment that is faulty/damaged.
- Employees shall take out of use, and then report any faults to electrical equipment to the Estates Department (PCEstates@uhi.ac.uk).
- Employees shall report any faults to electrical installations/systems they become aware of to the Estates Department (PCEstates@uhi.ac.uk) eg damaged sockets, damaged plugs etc.
- Employees shall report any accidents/incidents involving electrical equipment/systems as per the College's current accident reporting procedure.
- Employees shall report to their line manager and/or the Health, Safety Advisor any person they consider to be working unsafely ie compromising the safety of themselves and/or others.
- Employees using electrical equipment outdoors must ensure it is connected to the mains supply via an RCD.
- Employees that bring in their own laptops, mobile phones, radios etc are responsible for ensuring that these are safe to use (this includes any equipment used for charging them) ie that leads are not damaged, casing of radios are not damaged etc.
- Employees must **not** bring in their own their kettles, toasters, microwave ovens; portable heaters etc, if these items are required then staff speak to

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their line manager for advice. **Note:** The College does not encourage the use of personal electrical equipment by employees.

- Employees shall attend training as deemed necessary and also refresher training.
- Employees shall ensure that disposal of waste electrical equipment is carried out in accordance with College procedures for disposal as per WEEE regulations 2013.

5.8 Students

- Shall familiarise themselves and comply with this policy.
- No student shall work on or repair/alter/modify any electrical system or electrical equipment unless under direct supervision of an authorised person ie lecturer/technician.
- No student shall work on live electrical installations including equipment connected to it eg woodworking machinery, air conditioning units, hand driers etc unless it is absolutely necessary and that **ALL** the conditions in regulation 14 of the EAWR 1989 are met, in addition specific risk assessments must be in place, and the guidance in the HSE's publication HSG 85 must be followed. This includes the live testing requirements of BS7671. They must also be under the direct supervision of a competent member of staff eg lecturer or technician.
- Students shall make regular visual checks regarding the integrity of electrical equipment they use including supply cables to ensure no undue wear or damage has been sustained.
- Students shall **Not** use or allow to be used any electrical equipment that is faulty/damaged.
- Students shall take out of use, and then report any faults to electrical equipment to their lecturer or technician.
- Students shall report any faults to electrical systems they become aware of to their lecturer or technician eg damaged sockets, damaged plugs.
- Students shall report any accidents/incidents involving electrical equipment/systems to their lecturer or technician.
- Students shall report to their lecturer or technician any person they consider to be working unsafely ie compromising the safety of themselves and/or others.
- Students that bring in their own laptops, mobile phones, etc are responsible for ensuring that these are safe to use (this includes any equipment used for charging them).
- Students using electrical equipment outdoors must ensure it is connected to the mains supply via an RCD.
- Students that bring in their own electrical equipment ie amps and associated leads, anti-surge extensions, mixing decks etc are responsible for ensuring these are Portable Appliance Tested (PAT), students are to speak to their lecturer for advice on where to get these tested, and these items must be connected to the mains supply via an RCD.

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5.8.1 Students Residences

Note: The management of the Residences is outsourced to an external contractor. The Residences Staff are responsible for electrical items brought into the Residences by students:

- Students that bring in their own hair dryers, hair straighteners, games consoles etc are responsible for ensuring these are safe to use ie carry out visual checks of cables/leads including extension leads. Students **must** seek advice from Residences staff on the suitability of any adaptors/extension leads they bring into the residences to ensure the equipment is compatible with current UK fittings.
- The above will also apply to persons using the residences during the months of June, July and August, this could be students or commercial customers.
- Residences staff will advise students on the suitability of electrical adaptors, extension leads for use in the residences.
- Residences staff will carry out regular checks of student's electrical equipment to ensure it is in a safe condition.
- Residences staff will advise person's eg commercial customers using the residences in the months of June, July and August on the suitability of electrical adaptors, extension leads for use in the residences. SYHA staff will also carry out regular checks of any personal electrical equipment that is brought in and used by commercial customers to ensure it is in a safe condition.

5.9 Contractors and their Staff/External Lets

People working with or on behalf of the College are also required to comply with this Policy:

- Contractors will only use competent and fully trained staff operating under appropriate supervision.
- All contractors work must comply with the current edition of the IEE Wiring Regulations, relevant British/International Standards, and all statutory safety regulations, HSE Guidance, etc. A full specification must be prepared before work commences on any proposed installation. This shall indicate that the new work has been designed in accordance with correct procedure, good practice and current regulations. All electrical work must be fully documented and tested with correct commissioning procedures.
- Contractors working on high voltage systems must hold an appropriate and current certificate showing competence on high voltage systems.
- Contractors must not commence a work activity unless they have submitted the appropriate risk assessments/method statements to the Estates Department – these must have been read by a member of the Estates Department and/or the Health, Safety and Wellbeing Advisor.

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- Contractors must bring to the attention of the Estates Department any faults to electrical systems they become aware of as soon as is practicable.
- Contractors must obtain authority and approval to isolate an electrical supply, then they must ensure that the supply cannot be inadvertently reconnected. They must follow recognised safe isolation procedures eg Electrical Safety First's Best Practice Guide 2. A Permit to Work is also required HS038.
- Contractors bringing electrical equipment for use on campus ie amps and associated leads, extensions leads, tools, transformers etc will be responsible for ensuring these are Portable Appliance Tested (PAT), and when requested by a College employee they must provide a current test certificate.
- Failure to comply with this policy will mean immediate suspension of work activities until such time appropriate controls are in place.

5.10 Quality Manager

Quality approval check of the policy is the responsibility of the Quality Manager who will arrange for the policy to be posted on the website.

6 Linked Policies/Related Documents

Asbestos Policy
 Health and Safety Policy
 Lone Working Policy
 Working at Height Policy
 Contractors Induction Form HS085
 Permit to Work – HS038
 Electricity at Work – Safe Working Practices HSG85
 Maintaining Portable Electrical Equipment HSG107
 Safety in Electrical Testing at Work INDG354
 Electrical Safety for Entertainers INDG247
 Safety in Electrical Testing – Service and Repair of Domestic Appliances EIS35
 Safety in Electrical Testing – Service and Repair of Audio, TV and computer equipment EIS36
 Electrical Test Equipment for Use on Low Voltage Electrical Systems GS38
 Best Practice Guide 2 (Issue3) – Guidance on the Management of Electrical Safety and Safe Isolation Procedures for Low Voltage Installations (Electrical Safety First)
 IET Code of Practice for In-service Inspection and Testing of Electrical Equipment (4th Edition)

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7 Relevant Legislation

Health and Safety at Work etc Act 1974
Management of Health and Safety at Work Regulations 1999
Workplace (Health, Safety and Welfare) Regulations 1992
Electricity at Work Regulations 1989
The Electricity Safety, Quality and Continuity Regulations 2002
Provision and Use of Work Equipment Regulations 1998
Health and Safety (Display Screen Equipment) Regulations 1992 as amended
Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013
British Standard BS 7671 Requirements for Electrical Installations (also known as the IEE Wiring Regulations) **Note:** they are non-statutory regulations
The Waste Electrical and Electronic Equipment Regulations 2013

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