



RADIATION SAFETY - POLICY

Ionising and Non-Ionising Radiation

UHSP/13/RADS/2013

August 2017

NOTE: There is a new Ionising Radiation Policy ([UHSP/13/RADS/2017](#)) which replaces the arrangements set out in this Policy for Ionising Radiation.

This document sets out in more detail the arrangements for compliance with University Health and Safety Policy at Budget Centre level and it gives guidance on how these requirements may be met.

This document forms a part of the University Health and Safety Policy.

NOTE: This policy replaces UHSP/13/RADS/04



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INTRODUCTION

Aims of the policy

There are two broad categories of radiation: ionising and non-ionising. Radiation may be emitted from a variety of sources; some of these may not be as obvious as others. The human body generally absorbs radiation readily and in most cases the effects are adverse. The severity of the harmful effects depend on a number of factors, for example, the type of radiation, the energy adsorbed, the part of the body exposed and exposure duration.

Ionising radiation can be generated from particular equipment and from sealed and unsealed forms of radioactive material. The control and management of radioactive materials must be maintained at all times.

Non-ionising radiation can be subdivided into electromagnetic fields (e.g. microwave, radio frequency & extremely low frequencies) or optical radiation (e.g. ultra-violet, visible or infrared).

The University, Colleges, Schools, Supervisors and Individuals all have particular responsibilities for ensuring that the use of sources of radiation are safely controlled and managed.

The principles of radiological protection are such that there should be a justification for the use of any significant source of radiation, any exposure should be kept as low as reasonably achievable and that any dose or occupational exposure is kept below the statutory limit or recommended occupational standard.

Scope of the Policy

The Ionising Radiation Regulations (IRR 99) are enforced by the Health and Safety Executive (HSE) and are primarily concerned with the protection of employees and other persons present on the employer's premises against the effects of ionising radiations.

The Environmental Permitting Regulations 2010 (EPR 2010), as amended, are enforced by the Environment Agency. The Regulations are primarily concerned with the protection of the environment and public by controlling the keeping, use and disposal of radioactive material. This control is exercised by imposing limits on the amounts of radioactive material that may be present on premises and disposed of from them by various specified methods and subject to certain conditions.

The Control of Artificial Optical Radiation at Work Regulations 2010 (AOR) aims to protect workers from the risks to health from hazardous sources of artificial optical radiation (AOR) including lasers.

As yet no specific legislation exists controlling the use of or exposure to electromagnetic fields. However, there is a general requirement under the Health and Safety at Work etc. Act 1974 to assess risks to health and where there is a significant risk to take appropriate action.

The University is committed to restricting exposures so far as is reasonably practicable. In support of this policy, a number of Health and Safety Codes of Practice and Guidance Notes will aid the implementation of this policy.

POLICY

Heads of Budget Centre must make arrangements to ensure that:

For all sources of ionising and non-ionising radiation,

- risk assessments are carried out in advance of work commencing and that risk assessments are reviewed whenever there are significant changes to the work to ensure that they remain relevant;
- persons working with sources of radiation are capable to do so without undue risks to themselves, others or the environment;
- persons who may be at risk or have duties under this policy are provided with appropriate information, instruction and training;
- appropriate measures are provided to ensure that risks arising from activities involving sources of radiation are eliminated or controlled;
- equipment and facilities are maintained and where appropriate tested to ensure efficient and safe operation;
- where appropriate, health surveillance is provided in agreement with Workplace Wellbeing; and
- where appropriate, records of assessments, training and any incidents or accidents involving sources of radiation are kept.

For ionising radiation specifically, in addition to the general requirements for “all sources” detailed above,

- the University’s Radiation Protection Adviser is to be consulted in advance of risk assessments being carried out or where there is any significant change;
- sources of ionising radiation and any working areas designated are adequately identified;
- radioactive materials are identified and stored safely and securely;
- radioactive material stock records are kept and periodically checked to ensure that materials have not been lost or stolen;
- appropriate safety measures are taken to ensure containment of radioactive material in use and during any transportation on- or off-site and arrangements are in place to deal with any emergencies and compliance with any specific packaging or labelling requirements;
- all radioactive materials are disposed of safely and records kept in accordance with University requirements;
- local arrangements are in place for monitoring that the above are put into practice;
- where the College/School is large and it is impractical for one person to supervise a large number of radiation workers in a number of areas, a main contact be nominated to co-ordinate the arrangements in place (Radiation Protection Co-ordinator); and
- a competent person is appointed as Radiation Protection Supervisor (RPS) where there is a need for ensuring supervision of arrangements set out in “local rules”. The University Radiation Protection Adviser is to be consulted on the appointment of Radiation Protection Supervisors.

For laser safety specifically, in addition to the general requirements for “all sources” detailed above,

- a Laser Safety Officer is appointed to supervise the safe use of Class 3B and 4 lasers;
- lasers are classified, labelled and safely operated, as laid down in the *University Code of Practice on the safe use of lasers*;
- the Health and Safety Unit is notified of any intention to make, modify, buy or bring to the University any hazardous laser device;
- an inventory list of hazardous lasers, greater than Class 1, is kept current; and
- rooms, places, or total enclosures in which lasers, excluding Class 1 lasers, are used are marked with a laser warning sign.

Project or Work Supervisors must:

- ensure that work has been properly assessed before commencement;
- persons, under their supervision, have received adequate information, instruction and training;
- ensure that appropriate control measures are used and procedures followed and that persons are aware of the risks and procedures in the event of accidents or incidents;
- provide appropriate supervision and monitor compliance with policy and local working rules; and
- ensure that persons keep appropriate records.

Radiation Protection Co-ordinator will:

- co-ordinate the implementation of advice from the University's Radiation Protection Adviser;
- periodically review radiation protection procedures within their College/School;
- where new work is proposed, facilitate consultation with the University's Radiation Protection Adviser; and
- facilitate the collection and return of local records, such as disposal records, as required by the Health and Safety Unit.

Radiation Protection Supervisors must:

- oversee the work, from time to time, to ensure that persons are following the appropriate procedures set out in the "local rules"; and
- where unsafe working conditions, that may lead to radiation exposure, are identified that preventative action is recommended and pursued.

Individuals, including contractors and visitors must:

- co-operate with any person appointed to advise or monitor health and safety in the local safety arrangements for radiation safety;
- adopt safe practices in activities involving sources of ionising and non-ionising radiation, in particular to carry out the work in designated areas, to wear appropriate dosimetry, personal protective equipment and clothing where required;
- where required to keep appropriate records; and
- report any radiation incidents, accidents or defects in equipment relating to the handling or use of sources of ionising and non-ionising radiation to the local health and safety co-ordinator as soon as practicable.

ORGANISATIONAL ARRANGEMENTS for IMPLEMENTING the POLICY

This section outlines the organisational arrangements in the University for implementing the policy and arrangements for scrutiny of work with sources of ionising and non-ionising radiation.

a) University Level

The ultimate responsibility for ensuring implementation lies with the University; that is the University Council, the Vice-Chancellor as its Chief Executive and the University Executive Board. Heads of Colleges are responsible for ensuring compliance within their areas of control.

The University Executive Board has established a Joint Safety Advisory Committee (JSAC). The primary purposes of the Committee is to promote co-operation between the University and its employees in all matters concerning health, safety and wellbeing at work, to advise the University on health and safety policy and any measures to be taken to ensure the health, safety and wellbeing at work and to promote and advocate good practice in health, safety and wellbeing. Policy is approved by the Strategic Planning and Resources Committee.

The University has appointed a Radiation Protection Adviser (RPA), within the Health and Safety Unit, to give advice on all aspects of the use of ionising radiation in accordance with the Ionising Radiations Regulations 1999. Reports from the Radiation Protection Adviser are presented to Joint Safety Advisory Committee.

Workplace Wellbeing, in particular the Health and Safety Unit, operates at University level to:

- monitor implementation of this policy and procedures;
- handle communications with the Health and Safety Executive (HSE), Environment Agency (EA), EURATOM and any other relevant enforcing Authority relating to statutory notifications, reports and inspections;
- provide general training on radiation hazards and facilitate further training needs where appropriate, in the Colleges/Schools;
- maintain central records and archives, based on local records; and
- provide advice and guidance on radiation hazards.

Workplace Wellbeing, in particular the Occupational Health Unit, operates at University level to:

- provide health surveillance and where appropriate to take relevant action following any accidental exposure.

b) College/Budget Centre Level

In compliance with the Ionising Radiations Regulations 1999, the University Radiation Protection Adviser must be consulted prior to the commencement of new work with ionising radiation or any significant change to existing work.

Academic Supervisors, and ultimately Head of Colleges, are responsible for ensuring that work has been properly assessed, that those working with ionising radiation have received adequate information, instruction and training and that University Policy and Guidance is implemented.

Where the Budget Centre is large, it is impractical for one person to supervise a large number of radiation workers in a number of areas then a Radiation Protection Co-ordinator needs to be appointed to co-ordinate the arrangements in place. This Co-ordinator will also facilitate the collection of local records as required by the Health and Safety Unit.

A Radiation Protection Supervisor (RPS) is appointed where there is an area designed as a "Controlled" or "Supervised" Area as per the Ionising Radiation Regulations 1999. The Radiation Protection Supervisor's specific role is to supervise the work, involving ionising radiation, in accordance with the "local rules" set out for the work.

A Laser Safety Officer (LSO) is appointed where there are activities involving the use of Class 3B and Class 4 lasers.