

 NHS GREATER GLASGOW JOB DESCRIPTION

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| 1. **JOB IDENTIFICATION**

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| Job Title: | Consultant Clinical Scientist – Radiation Protection Adviser and Medical Physics Expert  |
| Responsible To: | Head of Health Physics |
| Department(s): | Health PhysicsDepartment of Clinical Physics and Bioengineering (DCPB)Gartnavel Royal Hospital |
| Directorate: | Diagnostics |
| Operating Division: | Acute |
| Job Reference: |  |
| No of Job Holders: | 5 |
| Last Update (insert date): | Version 2, April 2025 |

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| 1. **JOB PURPOSE**

The postholder fulfils statutory roles of providing expert advice to hospital senior management and scientific services (including the education and training of staff, and research and development work) within eight Health Boards to ensure the radiation safety of staff, patients and visitors and evaluates and audits practices and procedures to ensure legislative compliance. ROLE OF DEPARTMENTThe Department of Clinical Physics and Bioengineering (DCPB) provides specialist medical physics and clinical engineering services to NHS Greater Glasgow & Clyde (NHS GGC) and other Health Boards. These include Medical Equipment Management, Clinical Engineering, Core Services (incorporating **Health Physics**, MRI Physics, the Radionuclide Dispensary and PET-Radiopharmaceutical Production Unit), Radiotherapy Physics and Nuclear Medicine. It is one of the largest medical physics and clinical engineering departments in the UK, comprising over 350 staff.Health Physics provides a Regional Service comprising advice and a range of highly specialised scientific and technical support services to healthcare establishments utilising radiation in their clinical and other services. The establishments include all NHS hospitals and health centres within the eight Health Boards in the West and Borders of Scotland, hospitals run by the Scottish Government, and private organisations for which services are provided on a contractual basis (private dental and veterinary practices). The services include provision of comprehensive advice from qualified radiation experts, scientific and technical services, and reviews of all aspects of radiation protection. The purpose is to enable employers and staff to comply with all relevant radiation legislation and guidance (\*) and to ensure the safety of all patients, staff and members of the public who may be exposed to, or come into contact with, any radiation source. The Health Physics service maintains a continuing programme of research into the development of techniques relevant to the service.\* Some examples of relevant legislation and a key to abbreviations used elsewhere in this document are: Ionising Radiations Regulations 2017 (IRR17), Ionising Radiation (Medical Exposure) Regulations 2017 (IRMER17), Environmental Authorisation (Scotland) Regulations 2018 (EASR18), Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR19), Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 & ADR19, Control of Artificial Optical Radiation (at Work) Regulations 2011 (AOR11), Health and Safety at Work etc. Act 1974, Management of Health and Safety at Work Regulations 1999.**Scope of service**Health Physics comprises 18.5 whole time equivalent staff, 12.5 clinical scientists (medical physicists), 5 clinical technologists and one departmental secretary. Six consultant grade physicists are registered Radiation Protection Advisers (RPAs), three are Laser Protection Advisers (LPAs), one is a Radioactive Waste Adviser (RWA) and eight physicists are Medical Physics Experts (MPEs) in diagnostic & interventional radiology, as required by radiation safety legislation.The sites served include 12major teaching hospitals, 15 District General Hospitals, 49 smaller hospitals / Health Centres with medical X-ray departments and over 250 dental clinics across 8 Health Boards. There are also 50 departments using radioactive materials, with a large radiotherapy department housing 11 linear accelerators, 2 HDR brachytherapy units and 8 source treatment rooms, a satellite radiotherapy department (housing 2 linear accelerators) a Radionuclide Dispensary, PET Radiopharmaceutical Production Unit (Cyclotron) & PET Centre, 13 Nuclear Medicine Departments and 36 Radionuclide Laboratory Departments.There are over 900 X-ray units, including over 50 highly complex CT scanners, over 120 fluoroscopy units of varying complexity and approximately 10 dual-energy absorptiometry (DXA) units. Acceptance tests and critical examinations of safety features are carried out on all X-ray equipment before utilisation by clinical service (60-100 units per year), and routine tests on imaging and dose performance are carried out on 600 X-ray units each year (N.B. legislation requires that routine tests on most types of unit are performed annually). The tests range in length from 1 h to 2 days depending on the complexity of the equipment. Approximately 170 radiation measurement instruments of various types are calibrated each year (a legislative requirement).There are 108 surgical lasers, which are inspected every 2 years, and 88 phototherapy units that are calibrated 4-monthly to 2-yearly, and for which patient treatment plans are produced.Other services provided by Health Physics include X-ray patient dose surveys for a range of X-ray procedures, investigations into radiation incidents, of which there are about 480 each year, development of radiation safety documentation, specification of radiation protection requirements for new facilities, formulation of specifications for purchase of complex X-ray equipment, and preparation of applications for licences to hold and dispose of radioactive materials. Health Physics is responsible for the oversight of arrangements for personal radiation dosimetry, including the enhanced arrangements for classified persons.The Health Physics service maintains multiple complex databases storing records for various applications, including radiation equipment, calibration results, dosimetry records for classified persons and radioactive waste disposal records for transmission to SEPA. |

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| 1. **ORGANISATIONAL POSITION**

Head of Health PhysicsConsultant Clinical Scientist**Consultant Clinical Scientist** (RPA/MPE/LPA/RWA) x 5**(This post)**Technical ManagerPrincipal Clinical TechnologistKeyLine management responsibilitiesSupervision of projects and day to day tasksDepartmentalSecretary5 x Specialist Clinical Technologists 1.5 x Principal Clinical Scientist (MPE)4 x Senior Practitioner Clinical Scientist1 x Trainee Clinical Physicist5 x Specialist Clinical Technologists |

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| 1. **SCOPE AND RANGE**

The postholder performs various statutory roles, including Radiation Protection Adviser and Qualified Person (IRR17), Radioactive Waste Adviser (EASR18) and Medical Physics Expert for diagnostic and interventional radiology (IRMER17). The postholder has direct responsibility for provision of services to identified NHS Health Boards and deputises for colleagues in other Health Board areas.The postholder fulfils the role of Laser Protection Adviser (LPA) for identified NHS Health Boards and deputises for the other LPAs in all other Health Board areas.The postholder reviews and inspects department radiation safety facilities The postholder provides advice on a wide range of radiation safety matters by telephone, e-mail or letter to to management and staff The postholder provides technical advice for the specification and procurement of highly specialised diagnostic radiology equipment |

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| 1. **MAIN DUTIES/RESPONSIBILITIES**

Many of the roles and functions performed are required by different ionising radiation or radioactive substances regulations or Guidance and Standards relating to non-ionising radiations (see section 3 for key to abbreviations).The duties may be divided into 4 broad categories as follows: Scientific & Consultancy, Management & Strategic, Research & Development and Education & Training. An estimate of the proportion of time spent on each category is as follows:**Scientific & Consultancy, 40%** **Management & Strategic, 25%** **Research & Development, 20%** **Education & Training, 15%** 1. Consult with regulatory agencies, namely Health and Safety Executive (HSE), Healthcare Improvement Scotland (HIS), Scottish Government Health Department (SGHD) and Scottish Environment Protection Agency (SEPA) on legislative compliance and advise hospital management on changes in policy and strategy and how this may be achieved in a practicable manner. 2. Interpret requirements of ionising radiation legislation, standards and guidance, advise Health Board managers and staff on policies to meet these legal requirements, and provide expert scientific and specialist technical advice to facilitate compliance. 3. Design, specify, review and verify the radiation protection requirements for new and existing radio-diagnostic, radionuclide and radiotherapy facilities (IRR17), and non-ionising radiation facilities (HSWA1974).4. Provide advice and assistance to facilitate structured arrangements for radiation safety management in NHS establishments and collaborate with staff in their implementation.5. Plan, organise and carry out a programme of inspections, audits and reviews of radiation protection arrangements for departments (at least 10 times per year) and provide reports and advice based on these reviews (IRR17). This often involves re-allocation of tasks to facilitate operations relating to equipment availability and clinical deadlines. 6. Advise hospital managers and users on the arrangements for holding, disposal and transport of radioactive materials, and fulfil the function of RWA (EASR18, CDG2009). Perform associated environmental impact and risk assessments and verify results.7. Direct and collaborate in investigations into radiation incidents and produce reports for onward transmission to regulatory authorities (IRR17, IRMER17).8. Perform risk assessments relating to the use of ionising radiation (IRR17) and non-ionising radiation (HSWA1974).9. Collaborate with hospital management and staff in producing radiation safety documentation, including radiation safety policies, procedures, local rules, and risk assessments.10. Manage and direct critical examinations of safety features, acceptance tests confirming delivery to schedule and verifying equipment performance and commissioning tests for new diagnostic X-ray equipment and installations and give approval for equipment to be put into clinical use (IRR17, IRMER17).11. Interpret results from performance tests on X-ray equipment, surveys of radiology patient doses and other studies, verify results set out in related reports and recommend optimisation strategies for clinical use of X-ray equipment when required (IRMER17).12. Lead specialist for technical aspects of the Health Physics service. This may include one or more of the following:* 1. Radiology equipment specification
	2. Evaluation and exposure to non-coherent optical sources used in photodynamic therapy
	3. Lead for non-ionising applications
	4. Hazards for electromagnetic field exposure
	5. Emergency Planning

13. Provide dose and risk assessments for applications to local, multi-centre and national research ethics committees. 14. The postholder is expected to provide home contact numbers so that they can be contacted at any time day or night to provide advice. This applies to radiation incidents as they occur or staff members requiring clarification on dealing with patients who have received radiopharmaceuticals e.g. inexperienced nursing staff who are uncertain on how to deal with radioactive waste arising from such patients.15. Verify ultraviolet phototherapy patient dose assessments and provide highly specialised patient dose treatment charts that are used directly for the prescription of patient phototherapy treatment. Collaborate in development of patient dosimetry for new phototherapy techniques.16. Present scientific research and development work and scientific papers at local, national and international multidisciplinary conferences, meetings and in peer reviewed journals.17. Carry out and approve assessments of electromagnetic field strength and power density measurements to evaluate exposure hazards to staff and other. 18. Give lectures and contribute to radiation safety and other training to groups of health professionals (radiologists, cardiologists, dentists, radiation protection supervisors, radionuclide users, clinical staff, laser protection supervisors, laser theatre staff, phototherapy staff, and trainees in medical physics) in complex technical aspects of ionising and non-ionising radiation usage.19. Carry out research and development as part of formal research programmes relating to improvements in radiation equipment testing, radiation equipment performance, patient dosimetry and radiation safety, which influences practices & NHS patient dosimetry standards throughout the NHS.20. Make accurate measurements of radiation parameters using a range of specialist instruments.21. Provide scientific and technical advice on the calibration of ionising and non-ionising radiation measuring instruments, and design and develop new instrument calibration methodologies as required.22. Direct and participate in development of new test methods and test tools to evaluate the higher levels of performance of new medical x-ray equipment and the dose levels for new non-ionising radiation equipment.23. Plan and organise strategies for dealing with radiation emergencies at health board and national level and provide related services. Train staff in how to respond to a radiation emergency. Advise on the radiation risks and protective measures provided for NHS staff that are asked to respond to a major radiation incident to allay fears and allow informed consent and participation.24. Contribute to NHSGGC preparations for Radiation Monitoring Units.25. The post holder is additionally on a callout list to provide expert advice and assistance for any major radiation incident as part of the NHS emergency response role within the West of Scotland. This response includes directing professional staff at the A&E department as well as managing the monitoring and decontaminating the public at monitoring centres, where necessary.26. Provide advice and assistance to the Police under the NAIR Scheme (National Arrangements for Incidents involving Radioactivity) to deal with radiation emergencies. The post holder is expected to respond to such call outs by the police or hospital, in relation to major radiation incidents, at any time of day or night (see additional roles and responsibilities).27. Collaborate in training & supervision of physicist, technical and other staff who join or are attached to the service.28. Review current publications and guidance and amend clinical service protocols to ensure up-to-date and legally compliant testing methods.29. Analyse complex situations, which could result in radiation exposure, associated with new radiation techniques or facilities, and formulate risk assessments to identify equipment and procedural controls required (IRR17).30. Participate in working groups within Health Physics to propose changes in service provision to diagnostic imaging departments and to implement changes in internal policies and procedures.31. Calibrate a range of highly specialised radiation instruments used in assessment of patient exposure to agreed protocols, traceable to national standards, including radionuclide contamination meters, X-ray dosimeters and X-ray QA meters and verify accuracy of reports on calibrations performed by others. 32. Fulfil the appointed role of Laser Protection Adviser (LPA). The duties of which include the specification of laser protection requirements for new and existing facilities; the regular inspection of existing facilities; the provision of safety documentation including defining safe systems of work; performing specific risk assessments; investigation of incidents; the provision of laser safety training to clinical and technical staff.33. Advise on and contribute to the management of radiation assets in the National Medical Equipment Management System (NMEMS). |
| **7. SYSTEMS and EQUIPMENT****1) Instruments for measuring ionising and non-ionising radiation** A variety of highly specialised instruments are used in critical examinations, acceptance tests, calibrations and routine surveys for the assessment of the performance of X-ray and imaging equipment, radioactive contamination, radiation doses in the environment and to staff, patients and members of the public, UV irradiance, laser power and electrical safety. Radioactive calibration sources with calibrations traceable to national standards are also used.**2) Equipment whose radiation output is measured for routine performance tests and during acceptance before units are put into clinical use** The post holder is required to operate an extensive range of highly complex X-ray equipment, including CT scanners and interventional units. Equipment is operated competently and safely without supervision during commissioning, before units have been put into clinical use, and thereafter during routine performance testing.The post holder is required to operate competently, safely and without supervision a range of equipment emitting optical radiations, including UVA and UVB phototherapy cabins, surgical and therapy lasers, and photodynamic therapy lamps. **3) Computers, Commercial Software and Database Systems used in Health Physics****Computers**PCs and laptops are used for data collection; data analysis; producing reports, documents and drawings; database data entry and retrieval; architectural design and layout drawings review and analysis, calculation and design of radiological protection requirements; and email communication. Computers are used on a daily basis for extended periods. **Commercial Software** General purpose and specialised commercial software packages are used extensively on a daily basis. Packages include Microsoft Office (Word, Excel, Access, PowerPoint) used for producing reports, data analysis (including macro development and programming), data storage, preparation of talks and lectures. Access, SQL and Delphi-based database systems are used for data storage, retrieval and reporting for survey measurements, equipment inventory, equipment calibration, radioactive waste disposal records and producing patient treatment plans. ImageJ and other image processing packages are used for routine work and research.A range of proprietary software packages are used for control and operation of radiation measurement instrumentation and spectroradiometers.Proprietary software packages associated with complex x-ray equipment (e.g. CT, cardiology) are used regularly and on occasions with limited training opportunity and under severe time pressure (e.g. during acceptance testing of new equipment). AutoCad and Acrobat are used for architectural design and layout drawings. Datix Risk Management database used for the investigation of radiation incidents. Q-Pulse is used for document control. |

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| 1. **DECISIONS AND JUDGEMENTS**

A key function of the post as a Radiation Protection Adviser, Medical Physics Expert, Radioactive Waste Adviser and Laser Protection Adviser is to provide expert advice and exercise judgement on a wide range of matters relating to radiation safety, dose and imaging performance and legislative compliance based on knowledge and experience. As such, the postholder has the freedom to act independently and determine actions required by others in a wide range of situations. The postholder has to analyse highly complex information in a wide range of situations before providing appropriate advice from a variety of possible options. The post holder is required regularly to make decisions on safety of radiation facilities and the dose and imaging performance of radiation equipment in the field based on experience and skills. The postholder is required to provide independent advice to management on legislative compliance and design, and use and development of radiation services and facilities.Some of the judgements made are set out below.1. Assess risk and judge appropriate action to deal with an extensive range of enquiries involving ionising and non-ionising radiation exposure, radiation protection management, research ethics committees and radioactive waste disposal many times each day.
2. Judge whether new radiation equipment fulfils dose and imaging performance standards and safety standards and can be put into clinical use. Judge whether performance of existing X-ray equipment is acceptable. Make recommendations for optimisation, replacement or suspension as appropriate, several times per week.
3. Contribute to design and planning, and determine the protection requirements for new healthcare radiation facilities (10-15 times per year) to ensure safety of staff and patients. Assess risks to hospital staff and patients and judge whether practices in hospital departments relating to radiation use and safety are acceptable on an ongoing basis, and make recommendations for optimisation as appropriate.
4. Assess and judge the technological and safety aspects of X-ray equipment during specification and procurement and report accordingly, several times each week.
5. Assess the lifetime cost of new and replacement equipment, contribute to the shortlisting and selection decision process, confirm delivery and operation to specification, several times each month/year.
6. Verify whether reports of measurements of radiation equipment performance, radiation detection instrument calibrations, surveys of patient doses, and other radiation assessments are accurate. Judge the significance of findings and make recommendations based on them, several times per week.
7. Determine new methods for performing measurements on an extensive range of different types of radiation equipment to be set out in protocols, several times per year.
8. Assess risk and determine and recommend actions to be taken, following radiation incident investigations, documenting the recommended report to statutory authorities where applicable, several times each month.
9. Judge appropriateness of draft radiation legislation, standards and guidance circulated by regulatory bodies for consultation on behalf of management, several times per year.
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| 1. **COMMUNICATIONS AND RELATIONSHIPS**

Required to provide highly complex, technical and scientific expert advice to an extensive range of professional staff in other organisations at hospital, Health Board and wider levels. Required to interpret information related to legal compliance with respect to radiation safety, medical exposures, radiation equipment use, replacement and purchase, and retention and disposal of radioactive substances and communicate requirements to other groups. Communication may be by telephone, E-mail or letter. Written reports are prepared giving recommendations on a range of topics including reviews of radiation safety, radiation equipment performance, radiation equipment replacement, specification and procurement of diagnostic X-ray equipment, radioactive waste disposal strategies and incident investigations. The groups involved are set out below.**Management:** Provide advice on radiation safety requirements, radioactive waste management, replacement, specification and procurement of highly complex diagnostic X-ray equipment. Review radiation safety issues and provide input into service development. Contribute advice and recommendations at Radiation Safety Committees to consolidate radiation safety practices.**Clinicians and Dentists:** Advise on radiation safety, optimisation of clinical practices, scientific and technical aspects of radiation equipment performance, legislative requirements, and action following incidents, dose and risk assessment for application forms to ethics committees. **Other Professional Staff:** Provide information about radiation safety and legal compliance to a wide range of staff. Provide advice on operation of complex X-ray equipment and on dealing with radioactive patients. Interview staff as part of incident investigations. Explain necessary actions and precautions required when responding to a radiation incident and the level of risk involved. Give lectures, tutorials, demonstrations, practicals and other forms of training. Present scientific papers at national and international conferences.Statutory Inspectors and Agencies: Discuss hospital legislative compliance with statutory inspectors on behalf of hospital management, respond to official recommendations and issue replies. This includes representatives of the Scottish Government, the Health and Safety Executive, Healthcare Improvement Scotland, the Scottish Environment Protection Agency and Health Facilities Scotland.**Trainees and Students:** Give lectures and practical training on a range of topics to radiology trainees, trainee clinical scientists, clinical technologist trainees and other students undertaking a variety of degree courses. Supervise scientific and technical projects undertaken by medical physics trainees.**Non NHS staff:** Give advice on compliance with the relevant regulations and guidance.**Equipment Manufacturers/Suppliers:** Provide advice during installation of X-ray and other radiation equipment, critical examinations and acceptance tests. Assess performance of equipment and interview staff as part of investigations of radiation incidents resulting from equipment malfunction or human/procedural failure. **Design Teams, Hospital Estates & External Contractors:** Provide advice on design and planning of radiation installations and requirements during equipment installation for new and existing hospital developments to ensure legislative compliance and optimal design. **Police and other Emergency Services:** Agree strategy and provide ongoing advice on necessary actions and precautions to deal with radiation accidents and emergency situations. |
| 1. **PHYSICAL, MENTAL and EMOTIONAL DEMANDS OF THE JOB**

Physical SkillsSpecific requirements for accuracy while using radiation measuring equipment and operating complex imaging equipment (e.g. Cardiac, Vascular X-ray and CT etc); and for precision in positioning test equipment and phantoms to millimetre accuracy using radiation and laser alignment; and for constancy while recording measurement data and assessing images. Physical Demands1. Wearing a lead equivalent protective apron, weighing 5-6 kg for up to 2 h at a time, occasionally.
2. Entering data, typing reports and using various software packages on desktop PC or laptop computer for periods of 3 h, frequently.

Mental Demands1. The post holder is required to deal with an extensive range of tasks involving different demands, often at the same time. Intense concentration is occasionally required for extended periods in order to ensure the work is completed satisfactorily and all results verified. This work often has to be completed within a limited timescale.
2. Mental demands include detailed consideration of ethical, social and economic issues in order for balanced conclusions to be reached, and complex mathematical analysis coupled with spreadsheet calculations for specific problems.
3. The post holder is frequently required to concentrate for periods of 3 hours at a time, in order to ensure the work is carried out in a safe manner and that the highly complex information obtained is recorded accurately and presented in a clear manner.
4. The postholder is required to adapt to deal with frequent interruptions which require him/her to respond to requests for specific information and focus on a different task or activity.
5. The postholder will be required to provide immediate advice in response to evolving situations e.g. during radiation incidents.

Emotional Demands1. Interviewing individuals who may have contributed to radiation incidents during investigations.
2. Addressing the concerns of NHS staff and individual members of the public about their safety following a radiation exposure and allaying their fears.
3. Dealing with potentially highly distressed, emotional or anxious individuals during radiation contamination monitoring at radiation emergencies, whilst attending with other emergency services.

Working Conditions1. Some exposure to ionising and non-ionising radiation at radiation incidents or accidents or on faulty equipment, potentially under uncontrolled conditions and occasionally with the emergency services.
2. Working on building/construction sites during new build projects
3. Working off-site at various hospitals and sites in Health Board areas within the West of Scotland, driving up to 4,000 miles per annum to remote areas with 2-3 h journey times.
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| 1. **MOST CHALLENGING/DIFFICULT PARTS OF THE JOB**

Maintaining and updating knowledge and understanding of the implications of developments in multiple fields of scientific and technological progress, radiation regulations and legislation and clinical applications and professional standards to a level where highly specialised advice can be given to a wide range of groups involved.Concurrent involvement in multiple tasks and projects which require both management and analytical input for decisions in varying timescales, at multiple sites, some with short deadlines. The analysis and judgements may be scientific, mathematical, socio-economic, ethical, practical and multifaceted. |
| 1. **KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB**

**Education / Qualifications***Essential*1st or upper 2nd class honours degree in physics or allied subject.Recognised MSc in Medical Physics or equivalent experience.Certificate of completion of a formal medical physics training scheme equivalent to STP, or equivalent experienceHCPC registration as a Clinical Scientist Full UK driving licenceSpecialist Qualification:* RPA2000 Certificate of competency to act as a Radiation Protection Adviser under IRR17.
* RPA 2000 Certificate of Competence to act as a Medical Physics Expert under IRMER17.

*Desirable*PhD in Physics or research experience to an equivalent levelMembership of the Institute of Physics and Engineering in Medicine (MIPEM)Sufficient experience to gain RPA 2000 Certificate of competence as a Radioactive Waste Adviser; otherwise expected to obtain this within an agreed timescale following appointmentSufficient experience to gain RPA 2000 Certificate of Competence to act as a Laser Protection Adviser; otherwise expected to obtain this within an agreed timescale following appointment**Knowledge, Skills and Training***Essential*Comprehensive knowledge and experience in radiation protection and diagnostic radiology physics and experiential knowledge and understanding of other radiation and medical disciplines and management. Highly developed knowledge of relevant legislation, national standards, professional and other guidelines, sufficient to provide competent advice to other health care professionals.*Desirable*Specialist knowledge and experience of the medical uses of lasers and ultraviolet phototherapy in dermatology.An advanced level of scientific mathematical and analytical skills, required for complex calculations using spreadsheets and similar techniques to simulate physical interactions in practical situations.Highly developed specialist knowledge of work procedures and practices in radiology, radionuclide imaging and clinical applications of non-ionising radiations.Highly developed specialist knowledge to enable the post holder to act as MPE (in Diagnostic Radiology), and/or as RWA and/or as LPA or to obtain appropriate certification within a reasonable timescale.Training in techniques for testing of a wide range of highly complex X-ray equipment and non-ionising radiation equipment, and regular updating of this training.Training in requirements for dealing with radiation emergencies**Experience***Essential*Significant post qualification experience working as a clinical scientist in a range of clinical areas and specialisms in Radiation Protection / Diagnostic Radiology including a substantial level of responsibility.Evidence of experience in scientific research with scientific publications in relevant peer reviewed journals Practical experience in operation of a range of highly complex X-ray equipment and instruments for radiation measurement.Advanced knowledge of Excel, Word, Access etc. in particular for the purpose of setting up spreadsheets and databases to carry out complex scientific analysis of measurement data. Sufficient experience to fulfil a number of the following specialist roles: RPA, Qualified Person, RWA, MPE or LPA. Ability to build on their knowledge base through private study, and attendance at relevant presentations, courses and scientific meetings, and keep records of continuing professional development activities in order to fulfil the requirements to* maintain registration as a Clinical Scientist through the Health and Care Professions Council (HPC)
* maintain RPA, RWA, MPE and LPA certification (as applicable)

Experience in giving presentations at scientific meetings and lectures to groups of professional health care staff at the appropriate level.**Personal Attributes** *(All essential)*Good problem solving and analytical skills. Ability to act independently within professional guidelines, to communicate with a variety of staff groups, to manage a range of work activities, and to supervise other physics and technical staff. |
| **13. JOB DESCRIPTION AGREEMENT**A separate job description will need to be signed off by each jobholder to whom the job description applies. **Job Holder’s Signature:** **Head of Department Signature:** | **Date:****Date:** |