#### A blue and white logo Description automatically generated**NHS SCOTLAND JOB DESCRIPTION TEMPLATE**

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| JOB IDENTIFICATION |
| |  |  | | --- | --- | | Job Title: | Consultant Clinical Scientist, Head of Service - Radiotherapy Physics | | Responsible To: | *For operational and service delivery matters:*  General Manager, DCPB and Medical Illustration  *For clinical scientific and professional matters:*  Scientific Director, DCPB  *For clinical matters:*  Clinical Lead for Radiotherapy, Beatson West of Scotland Cancer Centre | | Department(s): | Department of Clinical Physics and Bioengineering (DCPB) | | Directorate: | Diagnostics | | Operating Division: | Acute | | Job Reference: |  | | No of Job Holders: | 1 | | Last Update (insert date): | Version 6b, January 2024 | |

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| 2. JOB PURPOSE |
| The Head of Service (HoS) leads, manages and is responsible for the comprehensive scientific and technical service provided by Radiotherapy Physics to the Beatson West of Scotland Cancer Centre (BWoSCC). They will empower their team to deliver high quality and innovative patient care through providing strategic leadership and by promoting a culture of inclusivity and continuous improvement. This post is within the Department of Clinical Physics and Bio-Engineering (DCPB).  The postholder will support the Scientific Director by developing and maintaining clinical and research governance processes for the Radiotherapy Physics work of DCPB and act as the lead Medical Physics Expert for Radiotherapy. |

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| **3. DIMENSIONS**  Radiotherapy Physics provides a comprehensive clinical physics service to the Beatson West of Scotland Cancer Centre, which is one of the largest UK cancer treatment centres providing radiotherapy treatment for more than 7,000 patients per annum in the west of Scotland. Its main base is at Gartnavel General Hospital, Glasgow with a Satellite Facility located at Monklands Hospital in Airdrie.  The Department of Clinical Physics and Bioengineering (DCPB) provides specialist medical physics and clinical engineering services to NHS Greater Glasgow & Clyde and other West of Scotland Health Boards. These include Medical Equipment Management, Clinical Engineering, Nuclear Medicine, Core Services (Health Physics, MRI Physics, Radionuclide Dispensary and PET Radiopharmaceutical Production Unit) and Radiotherapy Physics. It is one of the largest medical physics and clinical engineering departments in the UK, comprising over 350 staff.  Referrals for treatment of the full range of malignant disease originate from six Health Boards (Ayrshire and Arran, Dumfries and Galloway, Forth Valley, Greater Glasgow and Clyde, Highland and Lanarkshire) and for non-routine specialised treatments from all the Scottish Health Boards.  Work carried out within the Service complies with the Beatson’s ISO 9001:2015 Quality Management System and relevant legislation, including the Ionising Radiations Regulations 2017 (IRR 2017) and the Ionising Radiation (Medical Exposure) Regulations 2017 (IR(ME)R 2017). Staff participate in the ongoing development of quality systems and procedures. |

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| 4. ORGANISATIONAL POSITION |
| Please see organisational chart at end of document.  The HoS Radiotherapy Physics will be responsible to the General Manager, DCPB and Medical Illustration for operational and service delivery matters, to the Scientific Director, DCPB for clinical scientific and professional matters and to the Clinical Lead for Radiotherapy for clinical matters.  The post holder will liaise closely with the Head of Therapeutic Radiography and General Manager for Specialist Oncology Services on a day to day basis.  The post holder will deputise for the Scientific Director and General Manager for specified duties as required. |

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| 5. ROLE OF DEPARTMENT |
| * 1. Radiotherapy Physics consists of Clinical Scientists (Clinical Physicists) and Clinical Technologists organised in three groups: Equipment and Dosimetry, Treatment Planning & Imaging (incorporating Brachytherapy Physics) and the Clinical Physicist Pool. Radiotherapy Physics has its own programme of ongoing scientific research and development.   2. External beam radiotherapy treatments are provided using eleven linear accelerators at the Beatson (Glasgow) and two accelerators based in Monklands, which together with CT simulators, MR Simulator, treatment verification systems and a low energy x-ray treatment unit have a capital value in excess of £30M.   3. Radiotherapy Physics staff work closely with multidisciplinary teams of Clinical Oncologists, Radiographers and Nurses. Radiotherapy Physics staff support a wide range of specialist clinical services by carrying out radiotherapy treatment planning, brachytherapy physics, radiation dosimetry, equipment management and quality assurance, and by supporting medical imaging and networked radiotherapy patient information systems. Staff lead and support clinical developments and research, and provide education for multidisciplinary staff, trainees and students. This includes the delivery of post graduate teaching courses for the University of Glasgow.   4. Within Treatment Planning & Imaging, Radiotherapy Physics staff plan, lead, undertake, coordinate and deliver the wide range of support services for the radiotherapy systems and facilities used in support of treatment planning, imaging and verification. Physicists and technologists will ensure that external beam treatments are optimally planned for individual patients using the Centre’s computerised treatment planning systems, calibration of the Centre’s linear accelerators and imaging systems equipment according to national standards and protocols, measuring scientific data to allow reliable and accurate planning calculations and providing a clinical in-vivo dosimetry service. In addition, staff may undertake software development, support major capital equipment procurements, including preparing equipment specification and assessing tender responses, supervise and undertake equipment commissioning, acceptance and routine testing to national standards, develop and implement new techniques and technologies and design new quality assurance and performance testing regimes.   5. Within Dosimetry & Equipment, Radiotherapy Physics staff work within three areas to provide a complete scientific support service for the Beatson radiotherapy treatment, quality and networked radiotherapy systems. These areas are Dosimetry, Quality Management and Clinical Radiotherapy Systems. Dosimetry & Equipment incorporates the Radiation Technology management structure. Across these fields clinical scientists and technologists will provide scientific support in the end to end lifecycle management and clinical application of radiotherapy equipment and systems used in the Centre, including calibration of its linear accelerators and brachytherapy equipment according to national standards and protocols, measuring scientific data to allow reliable and accurate planning calculations and providing a clinical in-vivo dosimetry service. This includes a range of duties and activities including the planning and design of new radiotherapy facilities, supporting major capital equipment procurements, including preparing equipment specification and assessing tender responses, supervising and undertaking equipment commissioning and acceptance testing to national standards, medical equipment and system management and administration, developing and implementing new techniques and technologies, undertaking software development, designing new quality assurance and performance testing regimes, project management, and ensuring radiation hazards are managed according to regulatory requirements for patient and staff safety.   6. Staff within the Service, some of whom may be State Registered Clinical Scientists, may be delegated to undertake specific roles and this may include acting as a Medical Physics Expert as required by the Ionising Radiations (Medical Exposure) Regulations 2017, and to act as System Manager, and/or System Administrator, for the Centre’s clinical radiotherapy and information management systems. |

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| 6. KEY RESULT AREAS |
| **A. Managerial**  The postholder leads and manages the wide-ranging and comprehensive Radiotherapy Physics Service (scientific and technical) provided by DCPB to the Beatson West of Scotland Cancer Centre which serves a supra-area population. The principal duties are:-   * 1. To organise and manage the workflow of the Radiotherapy Physics Service, with delegation of duties to the Heads of Section through the Radiotherapy Physics Senior Management Group.   2. To liaise with the Clinical Lead for Radiotherapy, Head of Therapeutic Radiography and the General Manager for Specialist Oncology Services to ensure that the Radiotherapy Physics Service provided is of the range and quality required. The postholder, who is a member of the Beatson’s Radiotherapy Management Group, participates in wider aspects of the Centre’s strategic management and contributes to its scientific direction. This includes formulating and initiating policies for the provision of radiotherapy physics services to the Beatson.   3. To support the Scientific Director and General Managers by contributing to the annual review of the service level agreement between the Diagnostics and Regional directorates for the provision of a clinical physics service to radiotherapy.   4. To supervise the routine radiotherapy physics services provided and in particular to take responsibility for the: * Accuracy of all radiation dosimetry and the provision of clinical radiation data for radiotherapy patients. * Adherence to national and international codes of practice for radiation dosimetry. * Participation in national and international audits of dosimetry, imaging and treatment planning. * Mathematical accuracy of all computed patient radiation treatments. * Measurements and radiation dose calculations relevant to patient treatments with radioactive sources (brachytherapy). * Installation, commissioning, maintenance, quality assurance, reliability and safety of radiotherapy treatment machines and treatment simulators. * Radiotherapy imaging and networking systems and applications. * Utilisation of brachytherapy sources and afterloading treatment equipment.   1. To initiate and implement protocols and schedules of work for quality assurance procedures in all aspects of the work of the Radiotherapy Physics Service.   2. To consult directly with the Clinical Lead for Radiotherapy, Head of Therapeutic Radiography and the Scientific Director as required to provide them with expert advice and assistance on all matters pertaining to radiotherapy physics, including support in satisfying the requirements of IRR 2017 and IR(ME)R 2017. This includes ensuring there are sufficient Radiation Protection Supervisors and Medical Physics Experts to maintain a safe clinical scientific service.   3. To be responsible, in conjunction with the General Manager and Scientific Director for monitoring and establishing manpower requirements and for recruiting and training staff.   4. To provide assistance and advice on scientific and technical matters to Directorate Managers, NHS Board Managers and Senior Officers.   5. To formulate and maintain a 10 year strategy for the replacement of major radiotherapy equipment in conjunction with the Clinical Lead for Radiotherapy, Head of Therapeutic Radiography, General Managers and Scientific Director.   6. To prepare equipment specifications and evaluate equipment, treatment techniques and new technologies.   7. To lead multidisciplinary groups involved in the evaluation of new radiotherapy equipment as part of national procurements, including visiting suppliers’ clinical sites and development facilities; and negotiating with suppliers as appropriate.   8. To manage (in consultation with General Managers, Head of Therapeutic Radiography and DCPB HoS Medical Equipment Management), the radiotherapy segment of the asset register and to assist the General Manager and Scientific Director to manage the cost of providing the radiotherapy physics service.   9. To provide expert scientific and technical advice on the specialist building and highly complex installation requirements for treatment machines, simulators and brachytherapy radiation treatment systems. To work closely with senior Directorate Managers and Works Officers, Board Officers, Architects, Engineers, Surveyors, and Beatson Senior Management.   10. To act as Vice Chair of the Beatson’s Radiation Safety Committee and to discuss issues directly with the Radiation Protection Advisers and Supervisors.   11. To take managerial responsibility for the safe movement and monitoring of radioactive sealed sources, including maintaining associated mandatory records and liaising as required with the HoS Health Physics and Head of Resilience.   12. To maintain the Radiotherapy Physics sub-section of the DCPB risk register, ensuring risks are identified and characterised through risk assessment, and managed and escalated as appropriate.   13. To ensure that the regulatory requirements of SEPA (Scottish Environment Protection Agency), SGHSC (Scottish Government Health and Social Care), the HSE (Health and Safety Executive) and HIS (Healthcare Improvement Scotland) are met, particularly with regard to the medical uses of ionising radiation.   14. To provide advice on request to NHS Scotland and the Scottish Government on radiotherapy issues.   15. To contribute to the general work of DCPB in a senior managerial capacity as requested by the General Manager and Scientific Director, deputising for either as appropriate.       1. **Clinical Scientific**   16. To maintain certification and act as a Medical Physics Expert, under IR(ME)R 2017.   17. To act as an Operator under IR(ME)R 2017 with responsibility for complying with the employer’s procedures for work with ionising radiation.   18. To provide assistance and advice on scientific and technical matters to Consultant Clinical Oncologists and Head of Therapeutic Radiography.   19. To advise the Clinical Lead for Radiotherapy, Head of Therapeutic Radiography, General Managers and the Scientific Director on the need for and the choice of new and replacement equipment.   20. To liaise regularly with Consultant Oncologists, radiographers and the Mould Room on all aspects of patients’ treatment.   21. To serve on committees, local and national, whose work is of direct relevance to the development and application of Radiotherapy Physics.   22. To keep up to date with and be fully informed on scientific and technical progress in the practice of radiotherapy physics and on relevant protocols, legislation and regulations.   23. To co-ordinate the Radiotherapy Physics response in the event of suspected over-exposure of patients.   24. To ensure that the work undertaken by Radiotherapy Physics staff conforms to: * Standard protocols, such as those prepared for radiation dosimetry by IPEM (the Institute of Physics and Engineering in Medicine) and other professional bodies. * Extant national and international legislation and regulations, such as the Ionising Radiations Regulations 2017, Ionising Radiation (Medical Exposure) Regulations 2017, Control of Substances Hazardous to Health Regulations, Radioactive Substances Act 1993, Health and Safety at Work Act, General Data Protection Regulation, etc.   1. To ensure that the range and quality of the specialised Radiotherapy Physics Service is consistent with the Beatson’s designation as a Centre of Excellence and that the service meets local and national requirements.   2. To ensure that the Radiotherapy Physics Service maintains certification to appropriate quality standards, including ISO 9001:2015, and implements the Medical Physics and Clinical Engineering (MPACE) service accreditation standard BS 70000:2017.   3. To ensure the Radiotherapy Physics Service operates within Board clinical governance structures, preparing reports for consideration and ratification at the DCPB and Beatson clinical governance meetings.   4. To ensure a programme of audit is maintained to meet quality, clinical governance and regulatory requirements.   5. To ensure Radiotherapy Physics contributes to Beatson and DCPB incident reporting, management and shared learning exercises.   6. To support national data collection and reporting exercises, including the Radiotherapy Dataset (RTDS) and UKHSA Safer Radiotherapy initiative.   C. **Teaching and Training**   * 1. To be responsible for the teaching and training given by Radiotherapy Physics staff to Clinical Scientists, Clinical Technologists, Oncologists, nurses, students and trainees and to other staff groups as required. This includes staff formal training schemes such as the Scottish Medical Physics and Clinical Engineering Training Scheme (SMPCETS) or Fellowship examinations.   2. Designs and delivers components of the Radiotherapy Physics course of the University of Glasgow MSc Training Programmes for Clinical Scientists and other graduate and undergraduate courses including delivering lectures, preparing training material, undertaking tutorials, etc.   3. Ensures that all staff within Radiotherapy Physics receive the necessary training to achieve the competencies associated with their job roles and that training, competency and entitlement records are kept up to date.   4. Ensures that all staff within Radiotherapy Physics maintain and develop their experience in accordance with the relevant Knowledge and Skills Framework (KSF), Continuing Professional Development (CPD) and requirements for Personal Development Planning (PDP).   **D. Research and Development**  Research and development are essential for continuous service improvement and to ensure that the potential of complex new equipment, facilities and treatment modalities is fully realised for the benefit of patients. The postholder:   * 1. Encourages, instigates, plans, supervises and supports appropriate research and service development projects within Radiotherapy Physics in accordance with corporate direction. Arranges support from other DCPB sections as required through the Scientific Director, DCPB.   2. Prepares applications for research and development funding to undertake research and development projects.   3. Plans, supervises and participates in the commissioning and acceptance testing of newly developed and modified devices and systems for patient treatment, including those designed and constructed in-house, adhering and contributing to Board and DCPB procedures to ensure regulatory compliance. This includes Software as a Medical Device and Artificial Intelligence as a Medical Device.   4. Liaises closely with academic radiotherapy colleagues, being responsible for ensuring the Radiotherapy Physics requirements of clinical trials and research projects are characterised, accounted for and fulfilled.   5. Responsible for ensuring the requirements of IR(ME)R 2017 are satisfied for radiotherapy clinical trials and research projects, following prevailing Health Research Authority guidelines. This includes ensuring that radiation dose assessments are undertaken for trial protocols and confirming that the Beatson is able to comply with approved protocols.   **E. Professional**   * 1. Initiates, designs, leads and manages scientific developments and, where relevant, pursues commercial exploitation by the service.   2. Undertakes continuous personal professional development necessary to maintain the high quality of the service provided and takes a leading role in service developments. This includes attending suitable seminars and manufacturers’ specialist residential courses in order to keep up to date with the latest scientific and technological developments and their clinical applications in radiotherapy.   3. Keeps informed on scientific progress in radiotherapy physics and on all relevant regulations and legislation through reviewing literature, attendance at meetings, personal reading etc.   4. Plans and delivers scientific presentations to local, national and international meetings. |

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| 7a. EQUIPMENT AND MACHINERY |
| The postholder must have advanced knowledge and specialist understanding of the theory, operation, function and operating principles of highly complex radiotherapy equipment used within Radiotherapy Physics and across many staff groups and services within the Beatson. These are used regularly, often on a daily basis.  This includes the following:   * All equipment related to radiation treatment delivery including linear accelerators with multileaf collimators, stereotaxy delivery systems, on-board x-ray imaging systems, portal imaging devices, respiratory gating, dosimetry calibration systems, radiation room safety systems, and laser alignment systems for patient positioning. * Patient radiotherapy treatment recording and verification systems, including associated networked systems used to manage patient treatment data and medical images. * Other radiation treatment equipment including kilovoltage x-ray equipment, brachytherapy afterloading equipment, therapeutic radiation sources and associated handling equipment. * Equipment used in the design of patients’ radiation treatments including CT and MR simulators, diagnostic x-ray equipment, electronic contouring systems and networked computerised treatment planning systems. * Radiation treatment measurement and quality assurance equipment including beam data acquisition systems, radiation beam profilers, ion chambers, dosimetry phantoms and solid state dosimetry equipment. * Radiotherapy patient information system, PC systems, critical data archiving systems, and computer peripherals. * Radiotherapy Treatment Planning systems, including the Eclipse system and secondary dose calculation systems. * System design and operation of networked databases, spreadsheets and a range of quality assurance and medical equipment software and systems used extensively by Radiotherapy Physics and other Beatson staff (eg, ARIA, Eclipse Treatment Planning System, Q-Pulse and Radcalc). * Software packages include Microsoft (Word, Excel, Access, PowerPoint and Project) and programming tools for project design. |
| **7b. SYSTEMS** |
| The post holder must be aware of and comply with the UK General Data Protection Regulation (GDPR), Data Protection Act 2018, Caldicott Guidelines and local policies regarding confidentiality and access to patient records.  As lead Medical Physics Expert for Radiotherapy the postholder is responsible for the data integrity of all radiotherapy information systems, in particular the oncology management system, radiotherapy imaging systems, treatment planning systems and treatment delivery systems.  Other systems used regularly include:   * Written Local rules (IRR 2017) and standard operating procedures * ISO9001:2015 Quality Management System. (The service is currently working towards UKAS medical physics service accreditation against BS70000:2017.) * Project management methodologies * Divisional policies and procedures * Infection control policy * PECOS ordering system (used weekly) * Systems for appraisal and personal development planning for senior staff (TURAS, eKSF, etc.) * SSTS system for off-duty etc – post holder authorises duty (used weekly) * Control Book holder * Writing clinical reports that will form part of the patient record * Datix clinical and health and safety incident reporting * MPE investigation reports in response to incidents * National radiotherapy incident learning system |

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| 8. ASSIGNMENT AND REVIEW OF WORK |
| The post holder:   * 1. Works unsupervised on a day-to-day basis and has a high degree of autonomy in leadership, management and decision making within the Radiotherapy Department and in the Beatson.   2. Has the authority to define work and direction of work for self and others, according to the framework and scheme of delegation developed by the General Manager and Scientific Director, DCPB.   3. Has responsibility for the prioritisation of Radiotherapy Physics routine workload and research and development projects to meet broad objectives agreed with the General Manager and Scientific Director, DCPB.   4. Will report on activities via DCPB and Beatson governance structures (e.g. DCPB Clinical Governance Forum, DCPB Senior Management Group, Beatson Radiotherapy Management Group).   5. Work will be regularly reviewed through meetings with the General Manager and Scientific Director, DCPB. |

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| **9. DECISIONS AND JUDGEMENTS** |
| As a consultant scientist working in a clinical environment the postholder interprets highly complex multi-factorial problems within the field of radiotherapy treatment planning, radiation physics dosimetry and treatment equipment quality assurance; and ensures that appropriate action is taken. The postholder advises and takes decisions regarding treatment machine faults occurring during patient radiation treatments and makes judgements on whether such equipment is fit for use in treatment following fault repairs, etc.  The post holder is:   * 1. Responsible for ensuring procedures/protocols and work instructions relating to Radiotherapy Physics are appropriately reviewed and signed off in the ISO:9001:2015 Quality System.   2. Signs off concessions to allow deviation from Quality System protocols, based on the professional judgement of the clinical impact of denying or granting such concessions.   3. Makes decisions about the suitability of treatment units for clinical use and has lead responsibility within Radiotherapy Physics for deciding when equipment commissioning has been satisfactorily completed and the equipment can be put into clinical use.   4. Provides expert advice to the Beatson, DCPB and Health Board in making arrangements to comply with regulatory and statutory requirements relevant to Radiotherapy. In particular, the postholder has lead responsibility for interpreting legislation and guidance relevant to radiotherapy physics and ensuring that the necessary processes and procedures are in place to ensure compliance with legislation and best practice.   5. Provides and enacts advice as a Medical Physics Expert, under IR(ME)R 2017.   6. Takes a major role in the design of new treatment facilities, both in terms of technical specifications and provision for radiation protection.   7. Has a major role in the selection and procurement of highly complex radiotherapy capital equipment.   8. Has input into the national Radiotherapy Capital Equipment Replacement Programme (CERP) and represents Radiotherapy Physics on the associated Technical Specification and Evaluation (TSE) group. |

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| 10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB |
| The following list provides a few examples of some of the more challenging aspects of the job. This list is not exhaustive.   * 1. Making decisions and taking actions that may run counter to the desires/pressures of colleagues or other staff groups for instance: - when assessing service needs and setting appropriate staffing numbers/grades; balancing service and safety.   2. Negotiating and seeking agreements with other stakeholders when implementing procedures that have an impact on the practices of colleagues or other professional groups.   3. Interpreting incomplete information and scant evidence to make critical decisions under pressure.   4. Dealing with staff disciplinary matters. |

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| **11. COMMUNICATIONS AND RELATIONSHIPS** |
| The postholder, who works closely with the DCPB, Radiotherapy Physics and Beatson senior management teams and relevant Section Managers, communicates internally and externally as follows, negotiating and seeking agreement for complex courses of action:  ***Radiotherapy Physics Staff***   * Communicates decisions often of a highly complex nature and justifies reasons thoroughly. * Leads and involves staff in discussions on wide ranging strategic and service issues. * Sets service standards as appropriate. * Leads the Radiotherapy Physics Senior Management Team and meetings of Radiotherapy Physics staff as required. Communicates daily with Section Heads. * Communicates with Treatment Planning and Dosimetry staff on matters relating to treatment planning and about the calibration of radiation treatment equipment, quality assurance and safety. * Communicates with scientific colleagues at other Radiotherapy Centres both in the UK and abroad. * Discusses a wide range of staff issues including those relating to terms and conditions, training, leave, discipline and management.   ***Therapeutic Radiographers***   * Communicates to gain a clear understanding of problems with equipment or treatment implementation. * Gives advice on difficult planning problems with complex treatments (patient set-up, etc). * Collaborates on scientific developments in clinical practice. * Provides expert scientific advice on physical aspects of treatment problems. * Advises on new equipment and procedures. * Provides training as appropriate.   ***Nursing Staff***   * Communicates about patients’ brachytherapy treatments, equipment developments, problems, faults and suppliers’ visits   ***Clinical Oncologists***   * Provides advice on a broad range of highly complex scientific and technical matters including safety and use of equipment, treatment techniques departmental procedures, and effective use of resources. * Provides expert scientific advice on clinical service developments and research projects to senior clinical staff. * Provides expert advice on scientific matters pertaining to any untoward events, including suspected radiation incidents.   ***Students and Trainees***   * Gives lectures, tutorials and technical advice on radiation physics and technology to MSc students, trainee clinical scientists, trainee clinical technologists, physics students, medical students, registrars, student radiographers, nurses, etc.   ***Manufacturers’ Agents***   * Discusses detailed and complex technical information about treatment planning and specialised software and computer systems. * Resolves problems and faults on treatment planning and associated safety systems. Negotiates and complains as necessary. * Acquires specialist scientific and technical information relating to new equipment and systems in relation to specifications for purchase, installation, maintenance and clinical use. Negotiates contracts.   ***Beatson Groups***   * Member of the Radiotherapy Management Group and liaises with the Clinical Lead for Radiotherapy, Head of Therapeutic Radiography and General Manager of Specialist Oncology Services on day-to-day operational issues. * Participates in, and leads as appropriate, extant Beatson management committees, multi-disciplinary groups, QA groups, Short Life Working Groups, clinical teams, etc. * Presents seminars, topic reviews, etc to multi-disciplinary groups   ***DCPB***   * Supports the General Manager and Scientific Director, DCPB in management of DCPB staff. * Represents Radiotherapy Physics at the DCPB Clinical Governance Meeting and DCPB Senior Management Group. * Liaises with the Scientific Director when support is required for Radiotherapy Physics from other DCPB sections. * Communicates on scientific and service issues with Clinical Physics colleagues in other sections within DCPB and participates in committees as necessary. * Provides assurance to the Scientific Director that training and competency records are up to date for all duty holders under IR(ME)R 2017. * Collaborates with other DCPB heads of service to develop and implement pan-DCPB policies and procedures. * Engages with partnership representatives on topics affecting staff.   ***Wider Scientific and Medical and NHS Community***   * Presents scientific papers to national and international conferences. * Participates in national and international scientific or professional committees, working groups, etc. * Discusses scientific, clinical and professional issues with colleagues from other centres. * Actively contributes to IPEM interdepartmental dosimetry audit group * Communicates with senior Directorate staff, NHS Board officers, regulatory authorities and staff within NHS Scotland and Scottish Government. |

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| **12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB** |
| * 1. The postholder is required to deal with a range of complex tasks, often simultaneously, and subject to frequent interruptions and requiring high levels of concentration over protracted periods. There is a frequent requirement for sitting in a restricted position at computer terminals for long periods of time.   2. A high level of precision, dexterity and coordination is required when operating delicate dosimetry and radiation source handling equipment.   3. High levels of mental agility, concentration, numerical competency, manual dexterity, coordination and advanced 3D spatial awareness are required particularly when discussing complex treatment planning using specialist computer software.   4. There is occasional exposure to body fluids and hazardous chemicals when attending patients in clinical areas, treatment units, wards or theatre.   5. The post-holder is required to work in areas containing hazardous sources of radiation and to provide urgent advice on radiation incidents (e.g. source displacement).   6. There is regular exposure to distressing or emotional circumstances in clinical areas where cancer patients are planned and receive radiation treatment.   7. There is a regular requirement to deal with pressure from clinical staff to introduce new techniques and emotional pressure associated with staff disciplinary matters.   8. There is occasional requirement for manoeuvring and shifting heavy equipment (dosimetry equipment, phantoms, shielding blocks, equipment packages, etc weighing more than 15kg). |

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| 13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB |
| Staff at this level require specialist advanced scientific, leadership and management skills, knowledge and understanding gained by professional qualifications, training and practical experience.   |  |  |  | | --- | --- | --- | | **Qualifications** | **Essential** | **Desirable** | | 1st or upper 2nd class Honours degree in Physics or related subject | **X** |  | | Doctoral training in Physics, Medical Physics or a related subject, or equivalent experience | **X** |  | | Certificate of completion of a formal medical physics training scheme equivalent to STP, or equivalent experience | **X** |  | | Registration as a Clinical Scientist with the Health and Care Professions Council (HCPC) | **X** |  | | Eligibility for entry to Higher Specialist Scientist Register (HSSR) | **X** |  | | Completion of formal management and/or leadership training | **X** |  | | Continuing education at post-doctoral level and registration on a professionally recognised Continuous Professional Development scheme (e.g. IPEM). | **X** |  | | RPA 2000 Certificate of Competence to act as a Medical Physics Expert (MPE) | **X** |  | | Eligibility for Fellowship of IPEM or similar professional body | **X** |  | | Full UK driving licence | **X** |  | | **Experience** | **Essential** | **Desirable** | | Relevant post-qualification experience to include theory, operation, function and purpose of the broad range of complex radiotherapy equipment, including electromechanical systems, computer systems, electronic engineering, equipment design and construction, fault diagnosis and repair using a wide range of test equipment. | **X** |  | | Specialised knowledge and experience of radiotherapy equipment and systems, radiation dosimetry, equipment management, radiation technology, and treatment planning methods, including quality control and safety testing and an in-depth knowledge of relevant legislation, national standards and quality systems. | **X** |  | | Experience in a senior leadership or management position in a Radiotherapy Physics Service. | **X** |  | | **Behavioural Competencies** | **Essential** | **Desirable** | | A pleasant disposition and an ability to demonstrate leadership and management skills. | **X** |  | | Ability to develop effective working relationships with all levels of staff. | **X** |  | | Ability to relate to and communicate information in a clear and sympathetic way to patients. | **X** |  | | Ability to be a flexible team member and have an awareness of personal limitations | **X** |  | | Good time management skills | **X** |  | |
| |  |  |  | | --- | --- | --- | | **Other** | **Essential** | **Desirable** | | A proven ability to communicate on both a written and an oral level complex, highly technical and clinically sensitive information to medical care teams and other professionals within and outside the NHS. | **X** |  | | A proven ability to plan, organize and carry out development work / scientific research. | **X** |  | | A record of teaching, training and professional supervision involving junior and senior staff from a range of medical, scientific and technical disciplines. | **X** |  | |

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| **14. 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: |

**Organisational Charts**

**Radiotherapy Physics within the Department of Clinical Physics and Bioengineering (DCPB)**



**Radiotherapy Physics**

