

Clinical Scientist Job Description

Title: Clinical Scientist (HCPC registered) – MRI physics and non-ionising physics

Band: 7

Staff Group: Radiological Sciences Group, Medical Physics Department

Reports to: Head of Radiological Sciences Group

Job Purpose:

The main purpose of this post is, working under the lead MRI physicist, to provide MRI physics support to clinical users at Portsmouth Hospitals University NHS Trust and their clients at other sites. Additionally, the post will support colleagues who provide physics scientific and safety services to clinical users of lasers and UV.

- Provide specialised technical support in the field of MRI involving a broad range of specialised, complex, routine and non-routine scientific work specifically in:
 - The application of magnetic resonance imaging in clinical imaging
 - Quality control and performance assessment
 - Support for safety aspects of clinical MRI scanning and facilities
 - Support the safe introduction, application and optimization of new techniques and developments contributing to MRI service protocol and procedure development for this area of work.
- Provide support for safety, technical and advisory physics services to departments using clinical lasers.
- Provide quality control, equipment performance testing, and safety advisory services, to services using UV for phototherapy treatments
- Contribute to the day-to-day work of the Medical Physics department plus teaching and research and development activities

Key Responsibilities

For MRI physics

- Participate in the Quality Assurance programme for complex clinical MRI scanners, including routine testing, review of faults / post repair tests as required.
- Undertake equipment evaluation, acceptance testing and commissioning of new equipment. Ensure specifications are met and detailed baseline parameters are established, and that system performance characteristics are fully evaluated to aid optimization of diagnostic effectiveness.
- As directed by the principal MRI physicist, answer queries from the clinical teams regarding the safety of implant scanning in MRI.
- Support the writing and review of safety procedures / documents and the provision of safety audits for MRI facilities.
- Support any image optimisation processes and review of imaging artefacts.
- Working with the principal MRI physicist, support the review of plans for any new scanning facilities, selection of new MRI scanners and commissioning of scanners and facilities.

For lasers and UV physics

- Undertake measurements of as part of the Quality Assurance programme for clinical UV (phototherapy) systems.
- Conduct and contribute to the development of audits, risk assessments, safety procedures, investigations and training resources.
- As directed by the Laser protection Advisor LPA or lead physicist for UV (as appropriate), answer queries from the clinical teams regarding the safety aspects of system use in the clinical environment.
- Support the calibration and investigation of test equipment performance.
- Support the provision of advice to clinical teams when new systems / facilities (lasers or UV) are being planned and commissioned.

Professional

- Liaise with consultant clinical staff, radiographic, service leads, engineering, nursing and other staff providing specialized scientific and technical support, advice and appropriate training as directed in the field of MRI physics, laser and UV physics.
- Undertake work in accordance with established standards to high standards of accuracy, applying professional judgment and experience. Analyse results to identify options for remedial action to ensure the safety of patients. Issue reports under the supervision of the principal physicist / lead physicist.
- Work autonomously and in accordance with defined protocols and procedures on highly complex equipment. Undertake tests and measurements in standard and non-standard modes of operation to ensure accuracy of calibration and that the equipment operates correctly and within accepted limits.
- Ensure that work is carried out in a manner that minimizes exposure to those present and in accordance with local rules for MRI/lasers/UV radiation protection. Abnormal conditions are not intentionally created, unless as part of a strict procedure or with prior approval from lead physicist. Report incidents to the principal physicist / head of section and provide assistance to achieve a successful resolution.
- Attend internal and external courses/seminars/lectures to update knowledge in the field of MRI, laser and UV physics and other topics appropriate to the role.
- Undertake an appropriate continuing professional development (CPD) scheme (such as that organized by the Institute of Physics & Engineering in Medicine) as required to maintain HCPC registration.
- Work safely in the hazardous environments associated with MRI, laser and UV areas, taking appropriate precautions and working to Local Rules / instructions.

Managerial

- Keep and assist with the maintenance of records required by guidance / legislation.
- Manage and plan own work and the day-to-day work of staff in training ensuring that the lead physicist for the sub-modality (MRI/lasers or UV physics) is kept informed of issues or problems related to service provision.
- Supervise junior staff, trainees and pre-registration clinical scientists.
- Working with the Principal Physicist / lead physicist develop new procedures, protocols and policies for areas of complex scientific and technical work. Propose changes to improve the quality, safety and effectiveness of diagnosis and treatment.
- Support the development of spreadsheets, software, report pro-formas and protocols for all areas of work where required, to extract, manage and report the results of tests.

Teaching, training and research

- Undertake the practical training of STP trainees and pre-registration clinical scientists in the areas of MRI, UV and laser physics as appropriate.
- Assist in ensuring that staff are competent within the field of MRI, laser and UV physics according to individual training and development plans and that training is documented following departmental procedures.
- Undertake any required teaching of clinical staff, students or colleagues on the safety aspects of using MRI, lasers or UV in the clinical environment, as directed by the Principal Physicist / lead for the sub-specialty area.
- Contribute to the teaching and lecturing commitments of the section and wider department within Portsmouth Hospitals and at academic institutions and NHS Trusts where arrangements are in place with the Portsmouth Medical Physics Service.
- Actively contribute to the research, development and publication work of the section. Undertake investigations that result in development, improvements, optimisation of equipment or techniques.
- Support the supervision of any BSc or MSc level research projects the team may agree to supervise.
- Present results of work within section and departmental seminars, to client departments and at national / international educational and research conferences and forums as appropriate.

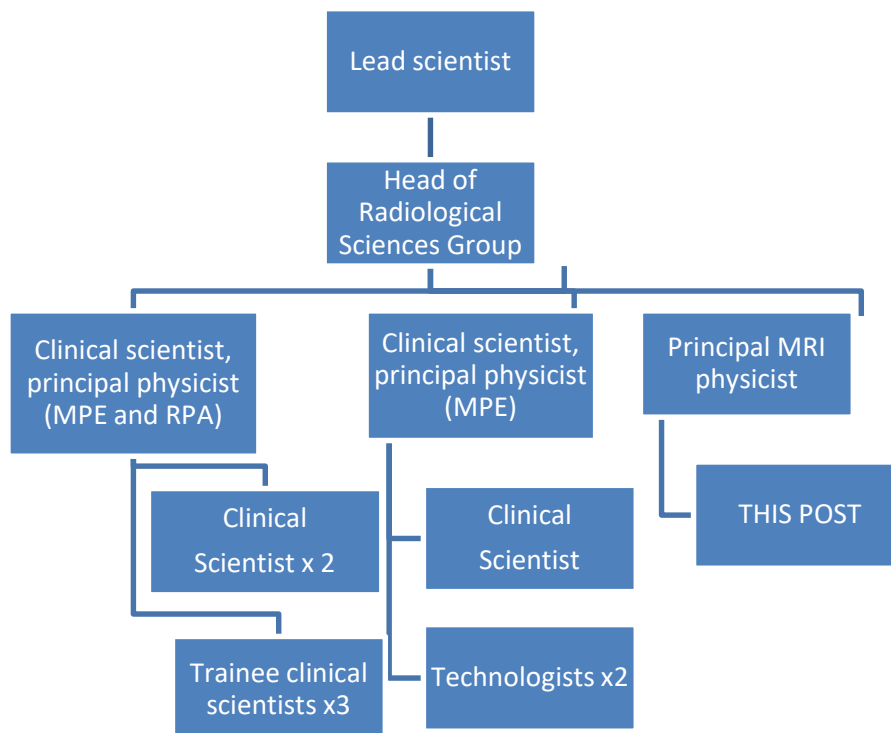
Other

Job Holders are required to:

- Maintain personal and professional development to meet the changing demands of the job, participate in appropriate training activities and encourage and support staff development and training.
- Adhere to Trust policies and procedures, e.g. Health and Safety at Work, Equal Opportunities, No Smoking.
- Respect the confidentiality of all matters that they may learn relating to their employment and other members of staff. All staff are expected to respect the requirements of the Data Protection Act 2018.

The job description does not purport to cover all aspects of the job holder's duties but is intended to be indicative of the main areas of responsibility.

Organisational Chart





Management Essentials

We are proud to offer a comprehensive development programme, Management Essentials, designed to equip staff with the skills and knowledge to become effective managers.

This post has been identified as a role that will benefit from this training, and you will be able to enrol in both mandatory and, relevant, optional modules upon commencement with the Trust.

Please click [here](#) for further information on the Management Essentials programme.



Leadership Insights

Additionally, our new leadership development programme, Leadership Insights, aims to help all newly promoted, existing and aspiring leaders, at every level at the Trust, to recognise, reflect and role model the core principles of people-centred leadership.

If, this is of interest to you, you will be able to enrol upon commencement with the Trust.

Please click [here](#) for further information on the Leadership Insights programme.

Person Specification

Qualifications and Experience

- BSc in Physics or Physical Science
- MSc (or equivalent e.g. MPhil) in IPEM approved medical physics related subject
- HCPC Registration via recognized route for Clinical Scientists in Medical Physics
- At least three years' experience and specialized knowledge of scientific, technical and safety aspects of MRI.

Skills and Knowledge

Essential

- Effective communication skills, both written and spoken
- Able to organize own work, data, documentation
- Able to provide leadership and supervision for projects and the work of others
- Able to prioritise work according to service demands
- Analytical approach to problem solving
- Experience using computers and standard Microsoft Office applications (Excel and Word) to a high level.
- Able to analyse facts and data methodically and accurately and extract significance
- Able to perform complex scientific measurements and tests with high precision, speed and accuracy, occasionally in hazardous conditions
- Able to work carefully, safely and competently with highly complex & costly equipment
- Understanding and ability in working safely with MRI and ideally lasers and UV.
- Able to provide teaching and training to professional, clinical and support staff
- Driving license

Desirable

- Experience using advanced data handling packages (e.g. Matlab, image J) and computer programming language
- Experience of research and development
- Good leadership skills
- Able to work independently and within different teams
- Experience of working safely whilst under pressure
- Able to balance competing priorities and demands within pressing timescales
- Basic management and project management skills

Personal Qualities

- Able to communicate complex facts and details to a wide range of professional groups
- Responsive and flexible attitude and approach
- Willingness to work at other sites within Portsmouth Hospitals University NHS Trust and at the premises of other client / collaborating organizations according to prevailing service requirements
- Highly self-motivated

Working Together: For Patients, with Compassion, as One Team, Always Improving.

Strategic approach (clarity on objectives, clear on expectations)

Relationship building (communicate effectively, be open and willing to help, courtesy, nurtures partnerships)

Personal credibility (visibility, approachable, back bone, courage, resilience, confidence, role model, challenge bad behaviour, manage poor performance, act with honesty and integrity)

Passion to succeed (patient centred, positive attitude, take action, take pride, take responsibility, aspire for excellence)

Harness performance through teams (champion positive change, develop staff, create a culture without fear of retribution, actively listen and value contribution, feedback and empower staff, respect diversity)

Job holders are required to always act in such a way that the health and well-being of children and vulnerable adults is safeguarded. Familiarisation with and adherence to the Safeguarding Policies of the Trust is an essential requirement for all employees. In addition, all staff are expected to complete essential/mandatory training in this area.

Print Name:

Date:

Signature: