



<b>Job title</b>	DGHPU Research Nurse/Paramedic Senior Human Studies Technical Specialist	<b>Job family and level</b>	Technical Services Level 4
<b>School/ Department</b>	School of Life Sciences	<b>Location</b>	Medical School, Queens Medical Centre

### Purpose of role

The Senior Technical Specialist role provides advanced expertise in human physiology and clinical monitoring and assessment techniques, and the skills and judgement required to safely execute invasive *in vivo* human research studies recruiting both 'healthy' and patient volunteers (in children and primarily adults). They organise and conduct these studies which include acute and chronic interventions.

The role holder carries out clinical techniques (such as cannulation, venepuncture), human metabolic and physiological measurements (such as indirect calorimetry and ultrasonography) and provides support / assistance to medical colleagues in the execution of invasive protocols in human volunteers.

Acute nursing or paramedic experience and judgement is essential to maintain the health, safety and wellbeing of participants, (including vulnerable cohorts) and veracity of data collection.

	<b>Main responsibilities</b> (Primary accountabilities and responsibilities expected to fulfil the role)	<b>% time per year</b>
1	<p><b>In vivo research studies (including those with patient cohorts)</b></p> <ul style="list-style-type: none"> <li>Planning, and executing human research studies (including volunteer recruitment, screening, and consenting of healthy volunteers and patients) to ensure that the studies are completed effectively and efficiently with suitable volunteers. Assisting and advising colleagues and post-graduate students in the execution of their studies, as required.</li> <li>Developing and maintaining skills to perform physiological testing and monitoring of human volunteers to time and quality standards. Documentation, collation, and analysis of data generated to deliver valid outcomes. Demonstrating initiative to resolve problems, including troubleshooting and developing of new physiological measurement techniques when appropriate. Communicating study progress and outcomes with line manager and wider research team.</li> </ul>	30%

	<ul style="list-style-type: none"> <li>▪ Organisation and prioritisation of own work schedule, within study constraints and demands of the team. Working with minimal supervision and management, but in collaboration with, and consideration of, others within a team of investigators and the David Greenfield Human Physiology Unit (DGHPU) Manager.</li> <li>▪ Use of relevant clinical information and identified study requirements, alongside own experience and knowledge, to recruit appropriate patient cohorts across the lifespan and disease categories, including paediatrics and clinically vulnerable when necessary.</li> <li>▪ Hold a research passport with the appropriate hospital trust, to enable the accessing of NHS information (patient names and hospital numbers), to support recruitment activity (after consent has been obtained from patients).</li> <li>▪ Utilising clinical and technical expertise to facilitate conversations and volunteer throughput with clinical collaborators during the execution of research protocols</li> <li>▪ Attend research project meetings with Principal Investigators e.g. to report progress, present data etc.</li> <li>▪ Support the DGHPU and the wider research group in communicating with, and facilitating 'IRAS' submissions to the Health Research Authority (HRA) to gain ethics committee approval.</li> <li>▪ It is expected that the role holder will have the drive and capacity to undertake a continued program of development to ensure technical skills required to cover evolving research needs are met.</li> </ul>	
2	<p><b>Clinical procedures</b></p> <ul style="list-style-type: none"> <li>▪ Performing specialised paramedic skills including carrying out adipose tissue biopsies, intramuscular wire electromyography, deep vein peripheral cannulation (upper limb), retrograde and antegrade peripheral vein cannulation (upper and lower limb, abdominal), ultrasonography, nasogastric tube insertion (healthy volunteers only), intravenous insulin and glucose tolerance tests, and putting up intravenous infusions of fluids and substrates.</li> <li>▪ Having responsibility for the health and well-being of volunteers during studies involving invasive procedures, and working alongside clinical colleagues to promote the health and well-being of volunteers during studies whilst at the same time delivering metabolic / pharmacological manipulations and metabolic and physiological assessments.</li> <li>▪ Providing first-aid cover for the School of Life Sciences (research/teaching/staff)</li> <li>▪ Being the participant's advocate</li> </ul>	30%
3	<p><b>Teaching and teaching support</b></p> <ul style="list-style-type: none"> <li>▪ Teaching, advising and supervising post-graduate students and colleagues in areas of own expertise, including occasionally assisting with undergraduate practical sessions, to disseminate knowledge.</li> <li>▪ Specifically, support and supervise post-graduate students, and researchers during human studies conducted within the research group, including training and support in the clinical and technical aspects of protocols and their delivery.</li> </ul>	15%

4	<p><b>Specialist Health and Safety</b></p> <ul style="list-style-type: none"> <li>▪ Maintaining and ensuring a safe and professional working environment to safeguard the interests of volunteers and colleagues by implementing HSE standards and International / National / local Ethics guidelines.</li> <li>▪ Contribute to the writing and updating of Risk Assessments and Standard Operating procedures (SOPs) within areas of expertise.</li> <li>▪ To act as the IR(ME)R practitioner for undertaking Dual-Energy X-Ray Absorptiometry (DEXA) across 2 schools; responsible for the justification of DEXA radiation exposures conducted as part of human research protocols and approved by an external Clinical Radiation Expert and Medical Radiation Expert.</li> <li>▪ Co-ordinate DEXA-related Risk Assessments, SOP's and audit paperwork to maintain adherence to IR(ME)R.</li> <li>▪ Act as lead Radiation Protection Supervisor for DEXA, alongside the unit manager, attending University Ionising Radiation Committee meetings to represent DEXA facilities at UoN. Liaising with University Radiation Protection Advisor, and University Safety office to ensure compliance with IRR17 regulations.</li> </ul>	10%
5	<p>Research study equipment</p> <ul style="list-style-type: none"> <li>▪ Prepare and test equipment prior to study days, carrying out required quality control and calibration checks. Maintain equipment in good working order to ensure safe and accurate working practice.</li> <li>▪ Work with the Unit physicians and advising the Unit Manager to ensure that emergency resuscitation equipment is complete and maintained and advise on any specialist emergency care requirements that may be required for new studies.</li> </ul>	10%
6	<p><b>Other aspects</b></p> <ul style="list-style-type: none"> <li>▪ Contribute positively to the School of Life Sciences, engaging with other colleagues to deliver School strategy.</li> <li>▪ Demonstrate a commitment to upholding the University's core values of inclusivity, ambition, openness, fairness and respect.</li> <li>▪ Any other duties appropriate to the grade and role.</li> </ul>	5%

## Person specification

	<b>Essential</b>	<b>Desirable</b>
<b>Skills</b>	<ul style="list-style-type: none"> <li>▪ Clinical skills including: IV cannulation and venepuncture; IV administration certificate; Administration of SC and IM injections; Immediate Life Support (ILS) or Advanced Life Support (ALS) training</li> <li>▪ Able to demonstrate an ability to recognise potential adverse health issues that may arise during research studies and an understanding of how to prevent and respond to these.</li> <li>▪ Willingness to learn new techniques and their theoretical basis.</li> <li>▪ Having the flexibility of mind and initiative to be able to adapt ways of working to meet different scenarios.</li> <li>▪ Able to demonstrate capability in conducting invasive clinical research (including acute and chronic intervention studies).</li> <li>▪ Able to demonstrate capability in the use and upkeep of equipment, including troubleshooting and identifying issues.</li> <li>▪ Proven ability to work accurately in order to provide valid, reproducible information</li> <li>▪ Able to demonstrate the ability to work effectively under pressure</li> <li>▪ Able to demonstrate the ability to build effective working relationships and collaborate with others both within a team and externally.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Familiarity with muscle function and exercise testing protocols and equipment.</li> <li>▪ NG tube insertion and management</li> <li>▪ Expertise in ultrasonography</li> <li>▪ DEXA operator trained</li> </ul>
<b>Knowledge and experience</b>	<ul style="list-style-type: none"> <li>▪ At least 2 years post-qualification experience of nursing in an acute care setting, or paramedic</li> </ul>	<ul style="list-style-type: none"> <li>▪ Experience of working in a research setting, including organisation and execution of physiology or clinical research studies</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Experience of team management and teaching / supervising junior colleagues and / or post-graduate students</li> <li>▪ Demonstrate extensive experience in organising and prioritising resources and work schedules to meet demands using a methodical approach to prioritising work, and advanced problem-solving capability.</li> <li>▪ Experience in working with vulnerable individuals, such as children and frail older individuals</li> </ul>	<ul style="list-style-type: none"> <li>▪ Experience and working knowledge of regulatory requirements associated with human research</li> <li>▪ Experience and working knowledge of regulatory requirements for managing and operating DEXA facilities in the context of human physiology research</li> </ul>
<b>Qualifications, certification and training (relevant to role)</b>	<ul style="list-style-type: none"> <li>• UK recognised registered nurse or paramedic qualification.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Radiation Protection Supervisor (RPS) certified</li> <li>▪ Recognised training certificate in IR(ME)R</li> </ul>
<b>Statutory, legal or special requirements</b>	<ul style="list-style-type: none"> <li>• Registered practitioner (NMC or HCPC)</li> <li>• Satisfactory Enhanced disclosure obtained from the Disclosure and Barring Service.</li> </ul>	



## Expectations and behaviours

The University has developed a clear set of core expectations and behaviours that our people should be demonstrating in their work, and as ambassadors of the University's strategy, vision and values. The following are essential to the role:

- Valuing people** Is friendly, engaging and receptive, putting others at ease. Actively listens to others and goes out of way to ensure people feel valued, developed and supported.
- Taking ownership** Is clear on what needs to be done encouraging others to take ownership. Takes action when required, being mindful of important aspects such as Health & Safety, Equality, Diversity & Inclusion, and other considerations.
- Forward thinking** Drives the development, sharing and implementation of new ideas and improvements to support strategic objectives. Engages others in the improvement process.
- Professional pride** Is professional in approach and style, setting an example to others; strives to demonstrate excellence through development of self, others and effective working practices.
- Always inclusive** Builds effective working relationships, recognising and including the contribution of others; promotes inclusion and inclusive practices within own work area.

## Key relationships with others



