

The Newcastle upon Tyne Hospitals NHS Foundation Trust**Job Description****1 Job Details**

Job Title	Medical Engineering Technician
Pay Band	5
Directorate	Estates
Ward/Dept Base	Medical Engineering Department (EME)
Hospital Site	Trust Wide and Community

Essential Requirements

- HNC in Medical/Electronics/Electrical Engineering related subject plus short courses, or equivalent training and experience.
- Significant experience in an electronic maintenance related discipline.
- A sound working knowledge of current analogue and digital electronics is essential.
- An appreciation of mechanical, pneumatic and electro-mechanical applications.
- A full understanding of the operation and calibration of diagnostic test equipment.
- Good interpersonal skills, in person and by telephone.
- Ability to effectively communicate with NHS staff at all levels.
- Excellent analytical skills.
- Computer use including database, word processing, internet and e-mail.
- Good levels of manual dexterity.
- Ability to work within a team of technicians and readily accept supervision.
- Calm under pressure.
- Self-motivated.
- Positive to change.
- Positive to team working.
- Respectful of colleagues.

Desirable Requirements

- Recognised Level 3 Medical Equipment Technologies qualification (e.g. Eastwood Park/Avensys).
- Recognised IT competency qualification.
- Experience working within an ISO 9001 environment
- Knowledge of NHS regulations and guidance relating to medical device maintenance.
- Previous experience working in a medical electronics maintenance field.
- Report writing skills.
- Current full UK driving licence.

2 Job Purpose

- The Medical Engineering Technician is responsible for the maintenance, calibration and repair of a range of medical electronic devices, some of which are complex and technologically advanced requiring an in-depth knowledge of current engineering techniques.
- Carry out planned maintenance, repair, calibration and servicing of medical equipment within the hospital, community premises and patients' homes.
- Acceptance test new equipment.
- Train medical and technical staff in the use of medical devices.

3 Dimensions

- Part of a multidisciplinary team of technicians who deliver high quality maintenance support for over 48,000 medical devices and other electronic equipment including Audio/Visual & CCTV Trustwide with an asset value totalling more than £140m.

Organisational Arrangements

Reports to: Medical Engineering Team Manager

Staff Responsible for: All technician grades/Admin staff/students/apprentice

5 Knowledge Training and Experience

- See essential requirements

6 Skills

Communication and Relationships

- Liaise with medical, technical, supplies department, risk management staff and equipment manufacturers regarding technical information including investigating and reporting of adverse incidents and equipment defects and failures.
- Discuss problems and possible resolutions with staff regarding service requirements.
- Trains medical and nursing staff in the correct use of new equipment which requires a basic understanding of the equipment's clinical application
- An ability to communicate effectively and professionally with staff, suppliers, patients/carers and customers under all conditions of urgency.

Analytical and Judgemental

- Assess and diagnose faults on technically complex medical devices, some of which may be connected to patients.
- Problem solve/analyse a series of events that led to the fault occurring and advise staff on the correct course of action to take.

Planning and Organisational

- Plans, co-ordinates and implements a programme of planned maintenance including personal responsibility for the maintenance of specialist equipment or departments.
- Implement necessary remedial actions recommended in Department of Health Safety Alert Bulletins or manufacturer's alerts, modification or software updates.
- Commission/install new equipment.

Physical Dexterity

- Diagnose and repair faults down to component level on all types of medical equipment using precision tools and calibration/test equipment requiring good levels of manual dexterity.
- Assemble new medical equipment.
- Have standard keyboard skills.

7 Key Result Areas**Patient / Client Care**

- Carry out calibration, repair and maintenance of medical equipment used in the diagnostic and therapeutic treatment of patients.
- The post holder has a personal responsibility to support the Trust in reducing hospital acquired infection. They must comply with the Trust's policies on infection, prevention and control and maintain your competency to effectively discharge your responsibilities. The post holder must bring deficiencies to the attention of the manager.

Policy and Service Development

- Proposes changes to Department policies and procedures to ensure equipment is used in a safe and efficient manner.

Financial and Physical Resources

- Responsible for the safe function of highly complex medical equipment with capital values of up to £50,000.
- Maintains stock levels, re-orders spare parts and accessories for medical devices (£10K/year).
- Responsible for the repair and maintenance of physical assets, total value in excess of £140m.

Human Resources

- Participate in the technical training of apprentices and students.
- Required to train apprentice technicians and medical staff in the correct use of equipment.
- Required to supervise apprentices and students.

Information Resources

- Responsible for accurately recording, documenting and maintaining equipment service records including test results and documentation from manufacturers.

Research and Development

- Provide technical evaluations and reports on new medical devices prior to purchase.

- Regularly undertakes equipment trials/testing on new and loan equipment (2-3 times a month).

8 Freedom To Act

- Work will be managed rather than supervised as the post holder will be required to use own initiative to ensure medical equipment is maintained in accordance with manufacturer recommendations, Electronics Department written standard procedures and Medicines and Healthcare Products Regulatory Agency (MHRA) guidelines.
- Guidance may be sought from senior team members.
- Required to exercise own judgement when carrying out external work for customers in other establishments or in patients homes.

9 Effort and Environment

Physical

- Required to carry out routine tests on medical devices
- Working on large devices e.g. ultrasound machines, lithotripter and heart bypass equipment often requires lying on the floor or bending over in cramped positions to enable repairs to be carried out.
- A lot of medical equipment is heavy (>15Kg) and needs to be transported to the Electronics Department and then lifted by hand onto a bench to enable repairs to be carried out (at least once a day).

Mental

- Required to carry out complex fault analysis for most of the day (75%). This is interrupted by frequent requests for emergency repairs to equipment either on a patient or required urgently for a patient.

Emotional

- Required to diagnose faults on life support equipment that is connected to critically ill patients in an ITU or clinical environment. (2-3 times a month).

Working Conditions

- Daily exposure to equipment that has been in contact with body fluids/biohazards.
- Exposure to electrical hazards, harmful chemicals, solvents, nitric oxide, calibration and compressed gases.
- To attend approved specialist manufacturers technical training courses and participate in Trust training courses identified in the post holders Personal Development Plan to update the knowledge and skills required to promote the continuous development of professional competence

Signed:
(Post holder)

Date:

Signed:
(Directorate Manager or equivalent)

Date:

The Newcastle upon Tyne Hospitals NHS Foundation Trust

Person Specification

JOB TITLE: Medical Engineering Technician

BAND: 5

DIRECTORATE: Estates

<u>REQUIREMENT</u>	<u>ESSENTIAL</u> Requirements necessary for safe and effective performance of the job	<u>DESIRABLE</u> Where available, elements that contribute to improved/immediate performance in the job	<u>ASSESSMENT</u>
Qualifications & Education	<ul style="list-style-type: none"> HNC in Medical/Electronics/Electrical Engineering related subject plus short courses, or equivalent training and experience. 	<ul style="list-style-type: none"> Recognised Level 3 Medical Equipment Technologies qualification (e.g. Eastwood Park/Avensys). Recognised IT competency qualification. Current full UK driving licence. 	
Knowledge & Experience	<ul style="list-style-type: none"> Significant experience in an electronic maintenance related discipline. A sound working knowledge of current analogue and digital electronics is essential. An appreciation of mechanical, pneumatic and electro-mechanical applications. A full understanding of the operation and calibration of diagnostic test equipment. Computer use including database, word processing, internet and e-mail. Good levels of manual dexterity. 	<ul style="list-style-type: none"> Experience working within an ISO 9001 environment Knowledge of NHS regulations and guidance relating to medical device maintenance. Previous experience working in a medical electronics maintenance field. 	
Skills & Abilities	<ul style="list-style-type: none"> Good interpersonal skills, in person and by telephone. Ability to effectively communicate with NHS staff at all levels. Excellent analytical skills. Ability to work within a team of technicians and readily accept supervision. 	<ul style="list-style-type: none"> Report writing skills. 	
Values / Behavioural / Attitudes	<ul style="list-style-type: none"> Calm under pressure. Self-motivated. Positive to change. Positive to team working. Respectful of colleagues. 		
Core Behaviours	<ul style="list-style-type: none"> Alignment to Trust Values and Core Behaviours Take personal responsibility to: <ul style="list-style-type: none"> engage with the Trust's Climate Emergency Strategy and Sustainable Healthcare in Newcastle (SHINE) initiatives; assist in embedding our sustainability values into everyday practice; and help ensure such practice is applied consistently by you and your colleagues 		

CANDIDATE:
SIGNED BY:
DESIGNATION:

REFERENCE NO:
DATE: