#### Form JE 5



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| 1. JOB IDENTIFICATION |
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| Job Title:  | Clinical (Mechanical) Engineering Technologist |
| Responsible to (insert job title):  | Team Leader (Mechanical Repair) |
| Department(s):  | Mechanical Repair, Clinical Engineering, Medical Physics |
| Directorate:  | Access and Assurance |
| Operating Division: | Diagnostics |
| Job Reference:  | **SCO6-1531(REV24)** |
| No of Job Holders:  | One |

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| 2. JOB PURPOSE |
| This post is part of the Clinical Engineering Mechanical Repair Service within the Department of Medical Physics.The Mechanical Repair Service is primarily concerned with the provision of repair, service, calibration and preventative maintenance to a wide range of diagnostic, therapeutic, dental, respiratory and lifting equipment throughout NHS Tayside. |
| **3. DIMENSIONS** |
| The post holder works within a team of 8 staff responsible for providing specialist medical equipment management services of procurement, installation, acceptance, servicing, regulatory inspections, repair, user training, technical support, decommissioning and disposal of over 8,000 medical devices within the NHST region.The post holder will report to the Team Leader but will be expected to arrange, evaluate and prioritise appointments within Acute and Primary Care NHS Tayside locations as well as within the Community.The post holder will order individual spare up to the value of £5000. |

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| 4. ORGANISATIONAL POSITION |
| The staffing complement of each of the Clinical Instrumentation Engineering Groups varies but typically consists of a Team Leader (Band 7), Specialist Clinical Engineering Technologists (Band 6), Clinical Engineering Technologist (Band 5 This Post) and Clinical Engineering Technologists (Band 4)– some of the groups may have Clinical Support Staff at Band 3 or Band 2 The Groups include – Renal Service, Anaesthetic Service, Mechanical Repair Service, Electronic Repair Service and Development, Project and Support ServiceOperations ManagerTeam LeaderClinical Engineering TechnologistsBand 5**This Post**Specialist Clinical Engineering TechnologistsBand 6Clinical Engineering Technologists Band 4Clinical Engineering TechnologistsBand 3Clinical Engineering Technologists Band 2Head of Medical Device and Risk Management |
| 5. ROLE OF DEPARTMENT |
| The medical physics department provides expert advice relating to safety (for patients, staff, members of the public and the environment) for all medical equipment and many medical devices used across NHS Tayside. The medical physics department is sub-divided into radiation physics, MRI physics, radiotherapy physics, nuclear medicine physics and clinical engineering. Clinical engineering is further sub-divided into anaesthetics, renal, mechanical, electronics, Perth, support services and design & development.The clinical engineering department provides a wide-ranging service, repair and contract management service to NHS Tayside. It hosts an equipment library and is engaged in innovation and clinical development work. |
| 6. KEY RESULT AREAS |
| **Technical (80% of time)**Routinely undertakes the repair, routine service and maintenance of a wide range of medical equipmentOccasionally undertakes design, construction and development of complex and non-complex devices and assemblies, normally for use in clinical settings, under the minimum of supervision.Occasionally programs and operate C.N.C. (computerised numerically controlled) milling machines for complex and non-routine work.Occasionally is required to operate or use: manual milling machines, center lathes, surface grinding, hand grinding, machine tool grinding, pillar and bench drills, M.M.A. welding, M.I.G. welding, gas welding, brazing, heat treatment, all types of blacksmiths work, joinery tools, all types of spray and brush painting, sheet metal cutting and forming tools, all types of hand and bench tools, all types of measuring and inspection equipment, polishing equipment. All for the manufacture of mechanical projects and devices.Required to assist with the repair and maintenance of all mechanical workshop machines and equipment.Participates in staff training on use of workshop equipment.If required undertakes the mechanical repair of medical and clinical patient care equipment.**Administrative (20% of time)**Responsible for keeping a record of work done, materials and components used, discussions relating to the work and any alteration to the working drawings, specifications or documentationAssists with the record keeping and stock control policies as laid down by Head of Medical Device and Risk Management. Order materials and stock as required by work at hand or to maintain stock levels. Assists with the maintenance of quality assurance and health and safety protocols embedded within Clinical Engineering services.Attends training courses as required**Responsibility for Records Management** All records created in the course of the business of NHS Tayside are corporate records and are public records under the terms of the Public Records (Scotland) Act 2011. This includes email messages and other electronic records. It is your responsibility to ensure that you keep appropriate records of your work in NHS Tayside and manage those records in keeping with the NHS Tayside Records Management Policy and with any guidance produced by NHS Tayside specific to your employment. |
| 7a. EQUIPMENT AND MACHINERY |
| Regular use of NHS Tayside equipment asset database (eQuip), mainly to order parts and materials required by the work at hand, (trained in the use of PECOS), Auto CAD, and Microsoft Office suite.As required, use of Bridgeport programmable C.N.C. milling machine with Heidenhan TNC 150 and 155 contouring controllers, Hardinge precision lathes (both metric and imperial types), bench grinders, pillar drills and other power and non-power mechanical engineering workshop equipment.Regularly required to use precision measuring equipment.Use of specialist and sometimes-hazardous adhesives and paints, which require specialist skills in their application and the use of Personal Protective Equipment (PPE).Use of various types of PPE: facemasks with different filtration filters, ear, eye, and hand and footwear protection. The post holder is required to maintain equipment logs relating to the PPE for their personal use.  |
| **7b. SYSTEMS** |
| Ensure that work is documented as required by the BS EN ISO 9001:2015 Quality System e.g. recording work done, batch numbers, components and materials used, part made, hours taken on job progression packet and storage of any documentation produced – drawing, specifications, etc.Regular use of NHS Tayside equipment asset database (eQuip). |
| 8. ASSIGNMENT AND REVIEW OF WORK |
| The post holder is a member of the Mechanical Repair Section. This section carries out research into and the design and development of new devices, systems or services as specified by the customer or from original ideas generated within Medical Physics. The majority of the items developed and manufactured by the section are for use in clinical settings in NHS Tayside. This section also develops items for sale to other NHS areas, third parties or commercialisation by industrial partners. The Mechanical Development Section also carries out modification, repair and maintenance of medical equipment used within NHS Tayside, by other NHS areas, University of Dundee customers and third parties. The post holder participates in this work. |
| **9. DECISIONS AND JUDGEMENTS** |
| The post holder must have the ability to work on own with the minimum of supervision and have good problem-solving skills.Must have good organisational skills to plan most effective way to complete and maintain flow of allocated work.Planning the manufacture of various mechanical parts from engineering drawings or ideas and sampleswith a very high degree of accuracy and speed.The post holder must determine which machines to use, how to hold work pieces on machine, the type of material to use and the type and size of cutting tools needed to complete the work as necessary to meetthe customers’ requirements. Interpreting customer requests and mechanical engineering drawings.Have good time management skills to ensure work allocated is completed on time and to a high standard. |
| 10. MOST CHALLENGING/DIFFICULT PARTS OF THE JOB |
| To maintain up to date knowledge of medical equipment maintenance and the latest technology by attending training courses, and to maintain high standards of work. |
| **11. COMMUNICATIONS AND RELATIONSHIPS** |
| The post holder must have effective verbal communication skills and be able to deal effectively and professionally with colleagues and other NHS, and University customers, manufacturers and suppliers.The post holder will be required to advise customers on the repair status of medical equipment and to deal with situations where expectations cannot be met.The post holder is required to keep the customer informed of the status of work being carried out and to maintain records of all actions taken. |
| **12. PHYSICAL, MENTAL, EMOTIONAL AND ENVIRONMENTAL DEMANDS OF THE JOB** |
| **Physical**: Post holder subjected to sitting, walking and standing at machines, daily moving work pieces from one position to another, the use of mechanical engineering tools and measuring instruments. As required moving from one machine type to another as the job progresses. Lifting heavy machine vices, 3 and 4 jaw machine chucks on and off machines with/without the use of lifting equipment.Occasionally manual handling of large and heavy medical equipment with/without the use of lifting equipment i.e. Floor cranes, block and tackles, slings, moving various types of gas cylinders for welding. Handling of large, sharp, heavy metal bars and sheet metal, using sharp metal cutting tools. Occasionally cleaning swarf and sharp metal pieces from work areas.Manual dexterity essential for working with small parts when assembling jobs. The post holder must have speed, dexterity and hand eye coordination to operate the workshop lathes and milling machines.**Mental**:Interruptions of work in hand to answer questions from customers and other technologists, or to go to other departments/wards to see and discuss work being carried out. Remembering the stage of the job in hand or equipment being worked on when switching from Development Services Section to the Mechanical Equipment Services Section. **Environmental**: Occasionally working with oil based cutting fluids, oils, paints, thinners, white spirit and various types of lubricating and cleaning aerosols.Occasional use of precision measuring equipment to ensure that manufactured and assembled parts meet the engineering drawing specifications.  |
| 13. KNOWLEDGE, TRAINING AND EXPERIENCE REQUIRED TO DO THE JOB |
| **Induction Standards & Code of Conduct** Your performance must comply with the national “Mandatory Induction Standards for Healthcare Support Workers 2009” and with the Code of Conduct for Healthcare Support Workers A recognised qualification in Mechanical Engineering subject or equivalent recognised experience in field of equipment repairExperience, as a minimum, should consist of significant experience in the field of mechanical equipment maintenance.A comprehensive knowledge of the related health and safety issues including the safe use of machinery and lone working plus COSHH and the NHS Tayside health and safety policies. |
| **14. JOB DESCRIPTION AGREEMENT** |
| A separate job description will need to be signed off by each job holder to whom the job description applies.Job Holder’s Signature:Head of Department Signature: **(I confirm this Job Description accurately reflects the duties and** **responsibilities of the postholder and does not impact upon any other** **postholders role)**  | Date:Date: |