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Clinical engineering

Clinical engineering staff check and maintain medical equipment to make sure it is safe to use and operating correctly.

Hospitals and NHS staff in the community rely on an increasingly wide range of medical equipment to provide excellent care to patients, so your role is vitally important.

Life as a clinical engineer

You'll need a background in electronic or mechanical engineering and the confidence and willingness to take a hands-on approach.

You'll enjoy a varied and exciting role maintaining and ensuring the safety of a wide range of medical equipment. This could range from simple devices such as nebulisers to sophisticated and life-saving equipment like radiotherapy [1] linear accelerators.

With experience, you can develop your role and gain greater responsibility to modify and construct equipment.

You will be responsible for managing medical equipment through its life cycle, ensuring that parts are replaced, guaranteeing that machines are always safe to use.

A typical day may include:

- testing new equipment
- introducing equipment and devices into service
- advising on the correct use of equipment
- addressing patient safety issues
- safely disposing of old devices

Hollie Owen

Apprentice medical engineer

It makes me feel good knowing that the equipment I fixed will go and help a patient get the treatment they need.

Read Hollie's story [2]

How much can I earn?

You'll be employed on a national pay and conditions system called <u>Agenda for Change (AfC)</u> [3] . Below are examples of the pay band you'll be on, depending on your role within neurophysiology:

- healthcare science assistant B2/3
- healthcare science associate B4
- healthcare science practitioner B5
- Cclinical scientist B6/7/8a
- consultant clinical scientist B8a-d

How about the benefits?

- make a difference
- flexible and part-time working
- high income early in your career
- work anywhere in the world
- excellent pension scheme
- good holiday entitlement
- NHS discounts in shops and restaurants

How to become a clinical engineer

Starting your career in clinical engineering might be easier than you think. You could undertake study at university or find an apprenticeship that takes you straight into a job.

There are a wide variety of entry levels into clinical engineering such as assistant or level 2 apprenticeships, associate practitioner roles, level 4 apprenticeships.

There are also Bachelor degrees/degree apprenticeships, Master's degrees and Higher Specialist Scientist Training.

See 'How to become a healthcare science professional' [4] for details.

Must-have skills

- excellent communication skills to manage a wide range of relationships with colleagues, patients and their families?
- emotional resilience, a calm temperament and the ability to work well under pressure?
- teamwork and the capacity to lead multidisciplinary teams?
- problem-solving and diagnostic skills?
- outstanding?organisational?ability and effective decision-making skills?

• first-class time and resource management for the benefit of patients

Entry requirements

There are several different ways to start your career in clinical engineering, depending on your experience and qualifications.

Apprenticeship

You could look for an entry level job/level 2 apprenticeship – typically GCSEs 9-4/A-C in maths, English and a science. If an apprenticeship feels right for you, you'll need 5 GCSEs at 9-4/A-C (or equivalent) including maths, English and science or Level 2 Diploma in Healthcare Science to start a level 4 apprenticeship.

Associate practitioner

An associate practitioner role is another route to a career in clinical engineering. You'll likely require foundation degree, or equivalent experience with training and experience to NVQ level 3.

Degree-level qualification

A level 6 apprenticeship or degree course require relevant level 3 qualifications, for example three A-levels (including at least one science subject) or an Access to higher education course.

Post-graduate

To start the NHS Scientist Training Programme, you'll need a 1st or 2:1 in relevant first degree or relevant higher degree and 2:2 in a relevant subject.

Higher Specialist Scientist Training is available for registered clinical scientists with relevant MSc or specialist diploma.

Where a career in clinical engineering can take you

Working in clinical engineering can lead to registration as a Clinical Scientist. You can then move into senior and consultant Clinical Scientist roles, through the <u>Higher Specialist Scientist</u> Training (HSST) programme [5].

It can also lead to careers in academia, research, industry, management and leadership and training.

Live vacancies

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Apprentice Medical Engineer

Sutton Coldfield, B75 7RR

Salary:

£14762.00 to £23874.00

Type:

Fixed-Term

Employer:

University Hospitals Birmingham NHS Foundation Trust

<u>Apply now on NHS Jobs for Apprentice Medical Engineer job (opens in a new window)</u> [6]

Medical Engineering (EBME) Technician

Wrexham, LL57 2PW

Salary:

£30420.00 to £37030.00

Type:

Permanent

Employer:

Betsi Cadwaladr University Health Board

Apply now on NHS Jobs for Medical Engineering (EBME) Technician job (opens in a new window) [7]

Senior Clinical Engineer

London, SE1 1YP

Salary:

£61927.00 to £68676.00

Type:

Fixed-Term

Employer:

Guy's and St Thomas' NHS Foundation Trust

Apply now on NHS Jobs for Senior Clinical Engineer job (opens in a new window)

Senior Clinical Engineer

Sheffield, S5 7AU

Salary:

£38682.00 to £46580.00

Type:

Permanent

Employer:

Sheffield Teaching Hospitals NHS Foundation Trust

Apply now on NHS Jobs for Senior Clinical Engineer job (opens in a new window)

[9]

Clinical Engineer Quality Assurance

Sheffield, S5 7AU

Salary:

£29970.00 to £36483.00

Type:

Permanent

Employer:

Sheffield Teaching Hospitals NHS Foundation Trust

Apply now on NHS Jobs for Clinical Engineer Quality Assurance job (opens in a new window) [10]

Clinical Engineering Technician: Electronics

Cambridge Bio Medical Campus, CB2 0AY

Salary:

£31049.00 to £37796.00

Type:

Permanent

Employer:

Royal Papworth Hospital NHS Foundation Trust

Apply now on NHS Jobs for Clinical Engineering Technician: Electronics job (opens in a new window) [11]

Chief Engineer

Nationally, SE1 8UG

Salary:

£100000.00

Type:

Permanent

Employer:

NHS England

Mechanical Engineer

Poole, BH15 2JB

Salary:

£29970.00 to £36483.00

Type:

Permanent

Employer:

University Hospitals Dorset NHS Foundation Trust

Apply now on NHS Jobs for Mechanical Engineer job (opens in a new window) [13]

IT Engineer

Colchester, CO4 9YQ

Salary:

£55000.00

Type:

Permanent

Employer:

Aria Care

Apply now on NHS Jobs for IT Engineer job (opens in a new window) [14]

Network Engineer

York or Scarborough, YO31 8HE

Salary:

£31049.00 to £37796.00

Type:

Permanent

Employer:

York and Scarborough Teaching Hospitals NHS Foundation Trust Apply now on NHS Jobs for Network Engineer job (opens in a new window) [15]

Rehabilitation Engineer

Amersham, HP7 0JD

Salary:

£46148.00 to £52809.00

Type:

Permanent

Employer:

Buckinghamshire Healthcare NHS Trust

Apply now on NHS Jobs for Rehabilitation Engineer job (opens in a new window)

[16]

Rehabilitation Engineer

Treforest, CF37 5TF

Salary:

Negotiable

Type:

Fixed-Term

Employer:

Cardiff and Vale University Health Board

Apply now on NHS Jobs for Rehabilitation Engineer job (opens in a new window)

[17]

IT Engineer

Colchester, CO4 9YQ

Salary:

£55000.00

Type:

Permanent

Employer:

Aria Care

Apply now on NHS Jobs for IT Engineer job (opens in a new window) [18]

Platform Engineer

Newcastle Upon Tyne, NE15 8NY

Salary:

£38682.00 to £46580.00

Type:

Permanent

Employer:

NHS Business Services Authority

Apply now on NHS Jobs for Platform Engineer job (opens in a new window) [19]

Senior DevOps Engineer

National, M1 3BN

Salary:

£62215.00 to £72293.00

Type:

Permanent

Employer:

NHS England

Apply now on NHS Jobs for Senior DevOps Engineer job (opens in a new window)

[20]

Dental Engineering Technician

317 02 Royal Victoria Infirmary, NE1 4LP

Salary:

£29970.00 to £36483.00

Type:

Permanent

Employer:

The Newcastle upon Tyne Hospitals NHS Foundation Trust

Apply now on NHS Jobs for Dental Engineering Technician job (opens in a new window) [21]

Digital Field Engineer

Colchester, CO4 9QS

Salary:

£29970.00 to £36483.00

Type:

Fixed-Term

Employer:

Essex Partnership University NHS Foundation Trust

Apply now on NHS Jobs for Digital Field Engineer job (opens in a new window) [22]

Principal Engineer - Electrical

London, WC1N 3JH

Salary:

£70387.00 to £80465.00

Type:

Permanent

Employer:

Great Ormond Street Hospital for Children NHS Foundation Trust

Apply now on NHS Jobs for Principal Engineer - Electrical job (opens in a new window) [23]

Craftsman (Electrical Engineering)

Plymouth, PL6 8DH

Salary:

£26530.00 to £29114.00

Type:

Permanent

Employer:

University Hospitals Plymouth NHS Trust

Apply now on NHS Jobs for Craftsman (Electrical Engineering) job (opens in a new

Senior Infrastructure Engineer

London, SE1 7NJ

Salary:

£54320.00 to £60981.00

Type:

Permanent

Employer:

Guy's and St Thomas' NHS Foundation Trust

Apply now on NHS Jobs for Senior Infrastructure Engineer job (opens in a new window) [25]

o IT Infrastructure Engineer

Hessle, HU13 0GD

Salary:

£35461.74

Type:

Permanent

Employer:

N3i Limited

Apply now on NHS Jobs for IT Infrastructure Engineer job (opens in a new window)

Engineering Maintenance Specialists

London, SE1 9RT

Salary:

£35964.00 to £43780.00

Type:

Permanent

Employer:

Guy's and St Thomas' NHS Foundation Trust

Apply now on NHS Jobs for Engineering Maintenance Specialists job (opens in a new window) [27]

o IT Infrastructure Engineer

Hull, HU3 4AE

Salary:

£37338.00 to £44962.00

Type:

Permanent

Employer:

City Health Care Partnership CIC

<u>Apply now on NHS Jobs for IT Infrastructure Engineer job (opens in a new window)</u>

[28]

Small Works Officer (Engineering)

Sunderland, SR4 7TP

Salary:

£31976.00 to £38926.00

Type:

Permanent

Employer:

City Hospitals Independent Commercial Enterprises Ltd (CHoICE)

Apply now on NHS Jobs for Small Works Officer (Engineering) job (opens in a new window) [29]

Mechanical Engineering Graduate Intern

Oswestry, SY10 7AG

Salary:

£29970.00 to £36483.00

Type:

Fixed-Term

Employer:

Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust Apply now on NHS Jobs for Mechanical Engineering Graduate Intern job (opens in a new window) [30]

Electro-Biomedical Engineer (EBME)

London, SW17 0QT

Salary:

£44806.00 to £53134.00

Type:

Permanent

Employer:

St George's University Hospitals NHS Foundation Trust

Apply now on NHS Jobs for Electro-Biomedical Engineer (EBME) job (opens in a new window) [31]

Specialist Engineering Supervisor - Electrical

317 01 Freeman Hospital, NE7 7DN

Salary:

£37338.00 to £44962.00

Type:

Permanent

Employer:

The Newcastle upon Tyne Hospitals NHS Foundation Trust

Apply now on NHS Jobs for Specialist Engineering Supervisor - Electrical job

(opens in a new window) [32]

Maintenance Engineer (Electrical Bias)

Cardiff, CF14 4XW

Salary:

£30420.00 to £37030.00

Type:

Permanent

Employer:

Cardiff and Vale University Health Board

Apply now on NHS Jobs for Maintenance Engineer (Electrical Bias) job (opens in a new window) [33]

Engineering Technician (Multi-skilled)

Chichester, PO196SE

Salary:

£29970.00 to £36483.00

Type:

Permanent

Employer:

University Hospitals Sussex NHS Foundation Trust (279)

Apply now on NHS Jobs for Engineering Technician (Multi-skilled) job (opens in a new window) [34]

Vehicle Technician/Fleet Engineer - Nursling

Southampton, SO16 0YU

Salary:

£39150.31 to £45805.00

Type:

Permanent

Employer:

South Central Fleet Services Ltd

Apply now on NHS Jobs for Vehicle Technician/Fleet Engineer - Nursling job (opens in a new window) [35]

Vehicle Technician/Fleet Engineer - Didcot

Didcot, OX11 8RY

Salary:

£39150.31 to £45805.00

Type:

Permanent

Employer:

South Central Fleet Services Ltd

Apply now on NHS Jobs for Vehicle Technician/Fleet Engineer - Didcot job (opens in a new window) [36]

Voice and Unified Communications Engineer

London, E2 9NJ

Salary:

£54320.00 to £60981.00

Type:

Fixed-Term

Employer:

East London NHS Foundation Trust

Apply now on NHS Jobs for Voice and Unified Communications Engineer job (opens in a new window) [37]

Telecomms Engineer / Deputy Switchboard Supervisor

Harlow, CM20 1QX

Salary:

£24625.00 to £25674.00

Type:

Permanent

Employer:

The Princess Alexandra Hospital NHS Trust

Apply now on NHS Jobs for Telecomms Engineer / Deputy Switchboard Supervisor job (opens in a new window) [38]

o 3D Digital Biomedical Engineer/Technician

London, SE5 9RW

Salary:

£54320.00 to £60981.00

Type:

Permanent

Employer:

King's College Hospital NHS Foundation Trust

Apply now on NHS Jobs for 3D Digital Biomedical Engineer/Technician job (opens in a new window) [39]

Electrical Engineering Technician (Multi-skilled)

Haywards Heath, RH16 4EX

Salary:

£29970.00 to £36483.00

Type:

Permanent

Employer:

University Hospitals Sussex NHS Foundation Trust (279)

Apply now on NHS Jobs for Electrical Engineering Technician (Multi-skilled) job (opens in a new window) [40]

Mechanical Plumbing Bias - Electrical/Engineering Craftsperson

Bodelwyddan, LL18 5UJ

Salary:

£30420.00 to £37030.00

Type:

Permanent

Employer:

Betsi Cadwaladr University Health Board

Apply now on NHS Jobs for Mechanical Plumbing Bias - Electrical/Engineering Craftsperson job (opens in a new window) [41]

Medical Junior Clinical Fellow in HIV

Croydon, CR7 7YE

Salary:

£49909.00 to £61825.00

Type:

Fixed-Term

Employer:

Croydon Health Services NHS Trust

Apply now on NHS Jobs for Medical Junior Clinical Fellow in HIV job (opens in a new window) [42]

Locum Medical or Clinical Oncology Consultant

Northampton, NN1 5BD

Salary:

£109725.00 to £145478.00

Type:

Fixed-Term

Employer:

Northampton General Hospital

Apply now on NHS Jobs for Locum Medical or Clinical Oncology Consultant job (opens in a new window) [43]

Advanced Clinical Practitioner - Lindley Medical Practice

Oldham, OL1 1NL

Salary:

£54075.00 to £60638.00

Type:

Permanent

Employer:

Gtd Healthcare

Apply now on NHS Jobs for Advanced Clinical Practitioner - Lindley Medical Practice job (opens in a new window) [44]

Further information

- Academy for Healthcare Science [45]
- Health and Care Professions Council [46]
- Institution of Physics and Engineering in Medicine [47]
- National School of Healthcare Science [48]
- UCAS [49]

Other roles that may interest you

- Clinical or medical technology in medical physics [50]
- Medical device risk management and governance [51]
- Knowledge and library services [52]
- Health records staff [53]

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[1] https://www.healthcareers.nhs.uk/glossary#Radiotherapy [2] https://www.healthcareers.nhs.uk/explore-roles/healthcare-science/roles-healthcare-science/physical-sciences-and-biomedical-engineering/medical-engineering/real-life-story-hollie-owen [3] https://www.healthcareers.nhs.uk/working-health/working-nhs/nhs-pay-and-benefits/agenda-change-pay-rates [4] https://www.healthcareers.nhs.uk/explore-roles/healthcare-science/how-become-healthcare-science-professional [5]

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