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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 Agenda for Change (AfC) [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> <u>Training (HSST) programme</u> [5].

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

# • Live vacancies

# Find a vacancy

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

#### Business Administration Apprentice – Medical Engineering

Birmingham, B15 2TH

Salary:

£14762.00 to £23874.00

Type:

Fixed-Term

Employer:

University Hospitals Birmingham NHS Foundation Trust Apply now on NHS Jobs for Business Administration Apprentice – Medical Engineering job (opens in a new window) [7]

#### • 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)

# • Clinical Engineering Technician Trainee

Dartford, DA2 6QL Salary: £25427.00 Type: Permanent Employer: Dartford and Gravesham NHS Trust Apply now on NHS Jobs for Clinical Engineering Technician Trainee job (opens in a new window) [9]

## • 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) [10]

## Senior Clinical Engineering Technologist

Aylesbury, HP21 8AL

Salary: £38682.00 to £46580.00 Type: Permanent Employer: Buckinghamshire Healthcare NHS Trust Apply now on NHS Jobs for Senior Clinical Engineering Technologist 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]

#### • 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) [14]

## • 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) [15]

## • Digital Field Engineer

Colchester, CO4 9QS Salary: £29970.00 to £36483.00 Type: Fixed-Term Employer: Essex Partnership University NHS Foundation Trust

#### • Decontamination Engineering Tradesperson

Cwmbran, NP44 8YN Salary: £30420.00 to £37030.00 Type: Permanent Employer: Aneurin Bevan University Health Board Apply now on NHS Jobs for Decontamination Engineering Tradesperson job (opens in a new window) [17]

#### • Mechanical Engineering Craftsperson

Wrexham, LL13 7TD Salary: £30420.00 to £37030.00 Type: Permanent Employer: Betsi Cadwaladr University Health Board Apply now on NHS Jobs for Mechanical Engineering Craftsperson job (opens in a new window) [18]

## • 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 window) [19]

#### • Renal Digital Engineer

Swansea, SA6 6NL

Salary: £48527.00 to £55532.00 Type: Permanent Employer:

#### • 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) [21]

## • 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)
```

#### • 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) [23]
```

#### • 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 <u>new window)</u> [24]

#### 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) [25]

#### • Maintenance Engineer (Electrical Bias)

Cardiff, CF14 4XW

Salary:

£30420.00 to £37030.00

Type:

Permanent

Employer:

Cardiff and Vale University Health Board <u>Apply now on NHS Jobs for Maintenance Engineer (Electrical Bias) job (opens in a</u> <u>new window)</u> [26]

## 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) [27]

## • 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) [28]

#### 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) [29]

## ICT Acute Customer Engagement Engineer

Warwick, CV34 5BW Nuneaton, CV10 7DJ Salary: £28090.00 Type: Permanent Employer: Innovate Healthcare Services Apply now on NHS Jobs for ICT Acute Customer Engagement Engineer job (opens in a new window) [30]

## • 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) [31]

# • End User Computing (EUC) Engineer

Manchester, M20 4BX

Salary: £37338.00 to £44962.00 Type: Permanent Employer: The Christie NHS FT <u>Apply now on NHS Jobs for End User Computing (EUC) Engineer job (opens in a new window)</u> [32]

# 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) [33]

#### • 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) [34]

#### Cloud and Infrastructure Apprentice Engineer

Cardiff, CF11 9AD Salary: £24433.00 to £26060.00 Type: Apprenticeship Employer: Digital Health and Care Wales Apply now on NHS Jobs for Cloud and Infrastructure Apprentice Engineer job (opens in a new window) [35]

## Unified Desktop Windows 11 Engineer

Basildon, SS16 5NL Salary: £31049.00 Type: Fixed-Term Employer: Mid and South Essex NHS Foundation Trust Apply now on NHS Jobs for Unified Desktop Windows 11 Engineer job (opens in a new window) [36]

#### • Mechanical Plumbing Bias - Electrical/Engineering Craftsperson

Bodelwyddan, LL18 5UJ

Salary:

£30420.00 to £37030.00 Type: Permanent Employer: Betsi Cadwaladr University Health Board <u>Apply now on NHS Jobs for Mechanical Plumbing Bias - Electrical/Engineering</u> <u>Craftsperson job (opens in a new window)</u> [37]

#### • Specialist Rehab Engineering Digital Manufacturing Technician

North Chailey, Near Lewes, East Sussex, East sussex, BN8 4JN

Salary: £37338.00 to £44962.00 Type: Permanent Employer: Sussex Community NHS Foundation Trust Apply now on NHS Jobs for Specialist Rehab Engineering Digital Manufacturing Technician job (opens in a new window) [38]

## 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 <u>new window)</u> [39]

## • Clinical Coder - Tieve Tara Medical Centre

Castleford, WF10 2QP Salary: £26530.00 to £29114.00 Type: Permanent Employer: Spectrum Community Health CIC Apply now on NHS Jobs for Clinical Coder - Tieve Tara Medical Centre job (opens in a new window) [40]

# 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) [41]

# Further information

- Academy for Healthcare Science [42]
- Health and Care Professions Council [43]
- Institution of Physics and Engineering in Medicine [44]
- <u>National School of Healthcare Science</u> [45]
- <u>UCAS</u> [46]

# Other roles that may interest you

- Clinical or medical technology in medical physics [47]
- Medical device risk management and governance [48]
- Knowledge and library services [49]
- Health records staff [50]

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#### Links

[1] https://www.healthcareers.nhs.uk/glossary#Radiotherapy [2] https://www.healthcareers.nhs.uk/exploreroles/healthcare-science/roles-healthcare-science/physical-sciences-and-biomedical-engineering/medicalengineering/real-life-story-hollie-owen [3] https://www.healthcareers.nhs.uk/working-health/workingnhs/nhs-pay-and-benefits/agenda-change-pay-rates [4] https://www.healthcareers.nhs.uk/exploreroles/healthcare-science/how-become-healthcare-science-professional [5] https://www.healthcareers.nhs.uk/career-planning/developing-your-health-career/nhs-higher-specialistscientist-training [6] https://beta.jobs.nhs.uk/candidate/jobadvert/C0020-25-1142 [7] https://beta.jobs.nhs.uk/candidate/jobadvert/C0020-25-1167 [8] https://beta.jobs.nhs.uk/candidate/jobadvert/C9190-25-0806 [9] https://beta.jobs.nhs.uk/candidate/jobadvert/C9252-25-0236 [10] https://beta.jobs.nhs.uk/candidate/jobadvert/C9175-25-0255 [11] https://beta.jobs.nhs.uk/candidate/jobadvert/C9434-25-0795 [12] https://beta.jobs.nhs.uk/candidate/jobadvert/M9990-25-0245 [13] https://beta.jobs.nhs.uk/candidate/jobadvert/C9153-25-0588 [14] https://beta.jobs.nhs.uk/candidate/jobadvert/C9434-25-0772 [15] https://beta.jobs.nhs.uk/candidate/jobadvert/C9317-25-0906 [16] https://beta.jobs.nhs.uk/candidate/jobadvert/C9364-25-0731 [17] https://beta.jobs.nhs.uk/candidate/jobadvert/H9040-25-1031 [18] https://beta.jobs.nhs.uk/candidate/jobadvert/H9050-25-2107 [19] https://beta.jobs.nhs.uk/candidate/jobadvert/C9216-25-0872 [20] https://beta.jobs.nhs.uk/candidate/jobadvert/H9130-25-0624 [21] https://beta.jobs.nhs.uk/candidate/jobadvert/C9196-25-1198 [22] https://beta.jobs.nhs.uk/candidate/jobadvert/E0009-25-0006 [23] https://beta.jobs.nhs.uk/candidate/jobadvert/C9224-25-0173 [24] https://beta.jobs.nhs.uk/candidate/jobadvert/C9200-25-0809 [25] https://beta.jobs.nhs.uk/candidate/jobadvert/C9317-25-0956 [26] https://beta.jobs.nhs.uk/candidate/jobadvert/H9001-25-0575 [27] https://beta.jobs.nhs.uk/candidate/jobadvert/C9279-25-1293 [28] https://beta.jobs.nhs.uk/candidate/jobadvert/M9195-25-0035 [29] https://beta.jobs.nhs.uk/candidate/jobadvert/C9363-25-0705 [30] https://beta.jobs.nhs.uk/candidate/jobadvert/M9203-25-0024 [31] https://beta.jobs.nhs.uk/candidate/jobadvert/M9195-25-0034 [32] https://beta.jobs.nhs.uk/candidate/jobadvert/C9413-25-0499 [33] https://beta.jobs.nhs.uk/candidate/jobadvert/C9213-25-0687 [34] https://beta.jobs.nhs.uk/candidate/jobadvert/C9279-25-1274 [35] https://beta.jobs.nhs.uk/candidate/jobadvert/M9025-25-0063 [36] https://beta.jobs.nhs.uk/candidate/jobadvert/C9390-25-1625 [37] https://beta.jobs.nhs.uk/candidate/jobadvert/H9050-25-1992 [38] https://beta.jobs.nhs.uk/candidate/jobadvert/C9150-25-0497 [39] https://beta.jobs.nhs.uk/candidate/jobadvert/C9199-25-0279 [40] https://beta.jobs.nhs.uk/candidate/jobadvert/E9847-25-0251 [41] https://beta.jobs.nhs.uk/candidate/jobadvert/C9265-25-0308 [42] http://www.ahcs.ac.uk [43] http://www.hcpc-uk.org/ [44] http://www.ipem.ac.uk/ [45] http://www.nshcs.hee.nhs.uk/ [46] http://www.ucas.com [47] https://www.healthcareers.nhs.uk/explore-roles/healthcare-science/roleshealthcare-science/physical-sciences-and-biomedical-engineering/clinical-or-medical-technology-medicalphysics [48] https://www.healthcareers.nhs.uk/explore-roles/healthcare-science/roles-healthcarescience/physical-sciences-and-biomedical-engineering/medical-device-risk-management-and-governance [49] https://www.healthcareers.nhs.uk/explore-roles/health-informatics/roles-health-informatics/knowledgeand-library-services [50] https://www.healthcareers.nhs.uk/Explore-roles/wider-healthcare-team/roleswider-healthcare-team/health-records-staff