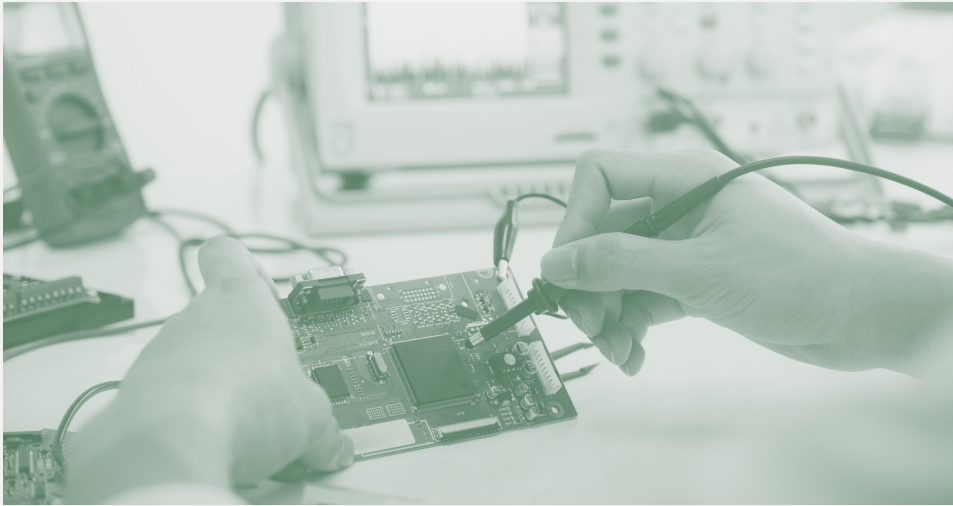


HEALTHCARE SCIENCE ASSOCIATE LEVEL 4 PROGRAMME PLAN - MEDICAL ENGINEERING PATHWAY

Duration: 24 months + End-Point Assessment (EPA)



CORE SESSIONS (ALL PATHWAYS)

- Being a Successful Student & Scientist
- Effective Communication
- Legal & Ethical context of working in Healthcare Science
- Health, Safety & Security
- Quality, Audit Research & Development
- Working in A Technical Environment
- Teaching, Training & Assessing Others
- Leadership, Supervision, Mentoring & Teamwork

PROGRAMME STRUCTURE

The programme is designed to develop Healthcare Science Associates working within Medical Engineering and Clinical Engineering services, supporting the safe use, maintenance and management of medical devices.

Learners typically work across NHS or private sector environments, contributing to patient safety through effective equipment management and technical support. Medical Engineering teams play a critical role in ensuring that clinical equipment is safe, reliable and fit for purpose across healthcare settings.

This programme develops the knowledge, skills and behaviours required to work confidently within engineering-focused healthcare environments, contributing to both service delivery and patient outcomes.

The apprenticeship is delivered through:

- Monthly **remote core sessions** (shared across all pathways)
- **Medical Engineering units** aligned to workplace role
- **Workplace-based technical practice and competency development**
- **Portfolio-based assessment** via e-portfolio
- **Regular coaching and progress reviews**
- **Gateway and End-Point Assessment** in the final months

Learning is applied directly within the workplace to support real service delivery, equipment safety and operational effectiveness.

ASSESSMENT METHODS

Assessment is portfolio-based and includes a range of workplace evidence demonstrating technical competence and applied knowledge.

Examples include:

- Direct observation of technical practice
- Reflective accounts of engineering activities
- Professional discussions
- Case studies and problem-solving activities
- Work products (e.g. maintenance records, equipment reports)
- Witness testimonies from colleagues or managers
- Competency-based assessments
- Knowledge questions or written assignments

All evidence is uploaded and reviewed through an e-portfolio system.



HEALTHCARE SCIENCE ASSOCIATE LEVEL 4 PROGRAMME PLAN - MEDICAL ENGINEERING PATHWAY

Total off the Job Hours: 578 over a 24 months duration

OFF-THE-JOB LEARNING ACTIVITIES

Learners complete off-the-job training in line with apprenticeship requirements. Activities include:

Core Learning

- Attending core sessions
- Completing knowledge-based assignments

Workplace Technical Practice

- Supporting maintenance and repair of medical equipment
- Carrying out planned preventative maintenance
- Assisting with equipment testing and commissioning
- Responding to faults and technical issues

Specialist Development

- Understanding the lifecycle of medical devices
- Developing diagnostic and problem-solving skills
- Supporting equipment safety and performance

Quality and Service Improvement

- Participating in audits and compliance activities
- Supporting improvements to processes and systems
- Contributing to safe and effective service delivery

Research and Professional Learning

- Reviewing policies, procedures and safety standards
- Understanding advances in medical engineering
- Developing technical knowledge and skills

Reflective Practice and Portfolio Development

- Writing reflective accounts
- Recording competencies and evidence
- Gathering feedback from colleagues

Coaching and Progress Reviews

- Regular reviews with coaches
- Setting development goals
- Preparing for End-Point Assessment

PROGRAMME OUTCOME

Apprentices will be able to:

- Support the safe use and maintenance of medical equipment
- Apply technical and engineering knowledge in healthcare settings
- Diagnose and resolve equipment faults
- Contribute to patient safety and service reliability
- Work effectively within multidisciplinary teams
- Support continuous improvement and innovation
- Operate within governance and regulatory frameworks

SPECIALIST PATHWAY DELIVERY – MEDICAL ENGINEERING

Delivered following the core units and aligned to workplace role.

Specialist units include:

- Anatomy and Physiology
- The Medical Equipment Lifecycle
- Acceptance Testing of New Medical Equipment
- Planned Preventative Maintenance (PPM)
- Diagnosing and Rectifying Equipment Faults

Learners develop the skills required to support the full lifecycle of medical devices, from procurement and commissioning through to maintenance and decommissioning.

This includes ensuring equipment operates safely, identifying faults, and contributing to efficient service delivery. Specialist teaching is directly linked to real workplace application.

END-POINT ASSESSMENT (EPA)

The apprenticeship concludes with an independent End-Point Assessment.

The assessment typically includes:

• Observation of Practice

Assessment of technical competence in the workplace

• Professional Discussion

Exploring knowledge, skills and behaviours

• Portfolio Review

Showcasing evidence of competence and development

Achievement:

Level 4 Healthcare Science Associate Apprenticeship

Grades available: Pass or Distinction

FUNCTIONAL SKILLS

Functional Skills in English and maths are optional for apprentices aged 19+.

Support is provided where required.

PROGRESSION OPPORTUNITIES

On successful completion, learners may progress to:

- Band 4 Healthcare Science Associate / Assistant Practitioner roles
- Roles in Clinical Engineering or Medical Equipment Management
- Senior technical or supervisory roles
- Level 6 Degree Apprenticeships (e.g. Healthcare Science / Engineering pathways)
- Careers in medical innovation, engineering or service management



 **Dynamic Training**

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