HEALTHCARE SCIENCE ASSOCIATE LEVEL 4 PROGRAMME PLAN - MEDICAL PHYSICS

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 Physics and related services, supporting the use of physics-based applications in clinical care.

Learners typically work in environments such as diagnostic imaging, radiotherapy, nuclear medicine, clinical engineering or medical equipment management, contributing to both patient-facing and technical roles.

Healthcare Science Associates in Medical Physics play a vital role in ensuring clinical equipment is used safely and effectively, supporting diagnosis, treatment and ongoing patient care. This programme develops the knowledge, skills and behaviours required to work confidently within technology-driven healthcare environments.

The apprenticeship is delivered through:
- Monthly remote **core sessions** (shared across all pathways)
- **Medical Physics units** aligned to workplace role
- **Workplace-based technical and clinical practice**
- **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 clinical application, service delivery and patient safety

ASSESSMENT METHODS

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

Examples include:
- Direct observation of practice
- Reflective accounts of technical and clinical activities
- Professional discussions
- Case studies and problem-solving activities
- Work products (e.g. reports, equipment checks, recorded outputs)
- Witness testimonies from clinical or technical colleagues
- Competency assessments
- Knowledge-based assignments

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

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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 assignments and knowledge tasks

Workplace Technical and Clinical Practice
- Supporting clinical teams in imaging or treatment environments
- Using specialist diagnostic or therapeutic equipment
- Recording and handling clinical or technical data
- Supporting safe and effective use of equipment

Specialist Development
- Developing understanding of medical technologies
- Applying physics principles in practice
- Supporting maintenance and safe operation of equipment

Quality and Service Improvement
- Participating in audits and equipment checks
- Supporting improvements in service delivery
- Reviewing safety and performance processes

Research and Professional Learning
- Reviewing policies, procedures and safety standards
- Understanding advances in medical technology
- Developing scientific and technical knowledge

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:
- Safely support the use of clinical and technical equipment
- Apply physics principles within healthcare environments
- Contribute to diagnostic and treatment processes
- Work effectively within multidisciplinary teams
- Ensure safety, accuracy and quality of equipment use
- Support innovation and technological advancement in healthcare
- Operate within governance and professional frameworks

SPECIALIST PATHWAY DELIVERY – NEUROPHYSIOLOGY

Delivered following the core units and aligned to workplace role.

Specialist units include:
- Anatomy and Physiology
- Scientific Basis of Medical Physics
- Application of physics in healthcare environments

Learners develop knowledge of how medical physics underpins clinical technologies and how equipment is used to support diagnosis and treatment.
The pathway supports both **patient-facing roles** (e.g. imaging support) and **technical roles** (e.g. equipment and engineering support).
Specialist teaching is directly linked to 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 and/or clinical competence
- **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

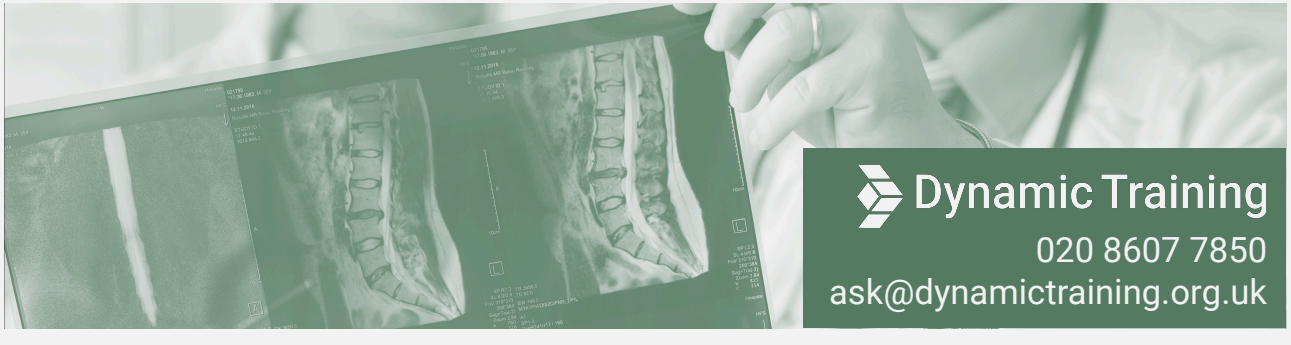
FUNCTIONAL SKILLS

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 medical engineering or equipment management
- Diagnostic or therapeutic radiography pathways (with further study)
- Level 6 Degree Apprenticeships (e.g. Healthcare Science / Medical Physics)
- Careers in clinical engineering, imaging or medical innovation



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