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Llywodraeth Cymru
Welsh Government

Welsh Apprenticeship Pathway

in

Healthcare Science

The content of this Pathway has been agreed by Health Education and Improvement Wales (HEIW), in collaboration with Healthcare Sector Employers. This is the only Apprenticeship Pathway in the Healthcare sector approved for use in Wales that is eligible for Welsh Government funding.

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LEARNING PROGRAMME CONTENT

The Learning Programme provision shall comprise of three mandatory elements:

- Qualifications,
- Essential Skills
- On/off the job training

The total minimum credit value required for the Level 3 pathway is 50 credits

The total minimum credit value required for the Level 4 pathway is 100 credits

ENTRY REQUIREMENTS

Employers from the Health Sector using this framework offer a broad range of skills training through the individual pathways, and welcome applicants from a wide range of diverse backgrounds and anticipate that they will have a wide range of experience, achievements and qualifications. The selection process by employers (or in partnership with learning providers) may include initial assessment where applicants will be asked if they have any qualifications or experience that can be accredited against the requirements of the apprenticeship. Apprentices will need to be able to comply with the Pre-Employment Checks of the employing organisation.

Level 3

Entry requirements are the same as Level 2, but also include:

Applicants may have already achieved a range of qualifications eg:

- Essential Skills Wales
- Level 2 Apprenticeship
- GCSEs
- GCE A Levels
- Welsh Bacculaureate (at this time there is no credit transfer)
- Welsh Bacculaureate with Principal Learning (at this time there is no credit transfer)
- Other relevant level 2 qualifications e.g. BTEC

Apprentices who wish to accredit any prior learning must select options within the Pathway which will equip them with new skills and learning.

Level 4

Entry requirements are the same as Level 3, but also includes

Applicants may have already achieved a range of qualifications eg:

- Essential Skills Wales
- Level 3 Apprenticeship
- GCSEs
- GCE A Levels
- Welsh Bacculaureate (at this time there is no credit transfer)
- Welsh Bacculaureate with Principal Learning (at this time there is no credit transfer)
- Other relevant level 3 qualifications e.g. BTEC, T Levels

Apprentices who wish to accredit any prior learning must select options within the Pathway which will equip them with new skills and learning.

APPRENTICESHIP PATHWAY LEARNING PROGRAMME(S)

Level 3: Apprenticeship in Healthcare Science

Qualifications

Participants must achieve one of the combined qualifications below.

Level 3 Diploma in Healthcare Science Qualification (Agored Cymru.cymru)					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
Agored Cymru	C00/4489/1	50	500 hours	Combined	English/Welsh
Level 3 Diploma in Clinical Imaging Support (Wales) Qualification (Agored Cymru.cymru)					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
Agored Cymru	C00/3964/3	60	600 hours	Combined	English/Welsh
Level 3 Principles of Aseptic Pharmaceuticals Processing 127052 (openawards.org.uk)					
Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
Open Awards	603/3312/1	56	560 hours	Combined	English/Welsh

Please see [Annex 2](#) for the relationship between the competence and knowledge units within the combined qualification.

Essential Skills Wales (ESW)

Essential Skills Wales qualifications assessment languages are English-Welsh

Level 3:	Level	Minimum Credit Value
Communication	2	6
Application of Number	2	6
Digital Literacy	2	6

On/Off the Job Training

Pathway	Minimum On the Job Training Hours	Minimum Off the Job Training Hours

	370	310
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On/Off the Job Qualification details (Minimum Credit & Hours)

On-the-job learning will comprise:

One of the Level 3 qualifications listed above

Evidence to support the application for an apprenticeship completion certificate for on-the-job training will include a copy of the qualification certificate detailing the units completed.

Off-the-job learning will comprise:

Level 2 Essential Skills Wales in Communication

Level 2 Essential Skills Wales in Application of Number

Level 2 Digital Literacy

Off-the-job training undertaken before the apprentice started their apprenticeship may count towards the off-the-job training required for the apprenticeship if it was undertaken in relation to an accredited qualification contained in the framework for which a completion certificate is to be applied for.

Evidence to support the application for an apprenticeship completion certificate for off-the-job training will include a copy of the qualification certificate for each of the above qualifications detailing the units completed.

It is expected that:

- On-the-job and off-the-job training hours are both planned, reviewed and evaluated jointly between the apprentice and a tutor, or teacher; their workplace supervisor or manager and, where relevant, the apprentice's coach or mentor.
- On-the-job and off-the-job training support via either a tutor, teacher, mentor or manager is made available when required by the apprentice.
- On-the-job and off-the-job training hours are delivered through one or more of the following methods: individual and group teaching; e-learning; distance learning; coaching; mentoring; feedback & assessment; collaborative/networked learning with peers; guided study.

On/Off the Job Essential Skills details (Minimum Credit & Hours)

- 6 credits / 60 GLH Level 2 Essential Skills Wales Communication
- 6 credits / 60 GLH Level 2 Essential Skills Wales Application of Number
- 6 credits / 60 GLH Level 2 Essential Skills Wales Digital Literacy

Level 4: Apprenticeship in Healthcare Science

Qualifications

Participants must achieve the combined qualification below.

Level 4 - BTEC Level 4 Diploma in Healthcare Science [BTEC Level 4 Diploma in Healthcare Science Specification \(pearson.com\)](https://www.pearson.com/qualifications/btec/level-4-diploma-in-healthcare-science)

Awarding Body	Qualification No.	Credit Value	Total Qualification Time	Competence / Knowledge / Combined	Qualification Assessment Language(s)
Pearson	603/2313/9	100	1000 hours	Combined	English/Welsh

Please see [Annex 3](#) for the relationship between the competence and knowledge units within the combined qualification.

Essential Skills Wales (ESW)

Essential Skills Wales qualifications assessment languages are English-Welsh

Level 4:	Level	Minimum Credit Value
Communication	2	6
Application of Number	2	6
Digital Literacy	2	6

On/Off the Job Training

Pathway	Minimum On the Job Training Hours	Minimum Off the Job Training Hours
	790	210

On/Off the Job Qualification details (Minimum Credit & Hours)

On-the-job learning will comprise:
 Pearson Level 4 BTEC Diploma in Healthcare Science
 Evidence to support the application for an apprenticeship completion certificate for on-the-job training will include a copy of the qualification certificate for the above qualification detailing the units completed.

Off-the-job learning will comprise:
 Level 2 Essential Skills Wales in Communication
 Level 2 Essential Skills Wales in Application of Number
 Level 2 Digital Literacy

Off-the-job training undertaken before the apprentice started their apprenticeship may count towards the off-the-job training required for the apprenticeship if it was undertaken in relation to an accredited qualification contained in the framework for which a completion certificate is to be applied for.

Evidence to support the application for an apprenticeship completion certificate for off-the-job training will include a copy of the qualification certificate for each of the above qualifications detailing the units completed.

It is expected that:

- On-the-job and off-the-job training hours are both planned, reviewed, and evaluated jointly between the apprentice and a tutor, or teacher, their

workplace supervisor or manager and, where relevant, the apprentice's coach or mentor.

- On-the-job and off-the-job training support via either a tutor, teacher, mentor, or manager is made available when required by the apprentice.
- On-the-job and off-the-job training hours are delivered through one or more of the following methods: individual and group teaching; e-learning; distance learning; coaching; mentoring; feedback & assessment; collaborative/networked learning with peers; guided study.

On/Off the Job Essential Skills details (Minimum Credit & Hours)

- 6 credits / 60 GLH Level 2 Essential Skills Wales Communication
- 6 credits / 60 GLH Level 2 Essential Skills Wales Application of Number
- 6 credits / 60 GLH Level 2 Essential Skills Wales Digital Literacy

OTHER ADDITIONAL REQUIREMENTS

Apprentices are required to:

- Be willing to undergo Disclosure and Barring Service checks (this is needed as apprentices may come into contact with children, young people or vulnerable adults)
- Be flexible as there may be a requirement to work shifts
- Comply with the pre-employment checks of the employing organisation

JOB ROLES

The latest version of the job roles and job descriptions for this Pathway can be found [here](#) Link to summary/Platform. Link to be inserted post consultation

PROGRESSION

Progression following completion of an Apprenticeship is not automatic but will be dependent on promotion opportunities and employer policy on accessing study/training.

Level 3

Progression routes into the Apprenticeship:

See Entry Requirements

Progression from the Apprenticeship:

Learners may progress from this pathway onto a Level 4 Apprenticeship or progress onto further qualifications specific to their work context. A wide range of qualifications are available for use within the health sector. These may include further qualifications, a range

of higher education qualifications or other work-related education and training to support Continuing Professional Development.

Progression should not just be seen as vertical. In some instances, progressing into another role at the same level may be just as rewarding as it offers the opportunity to develop new skills and knowledge.

Many Apprentices will complete their apprenticeships and continue to work as Healthcare Science Assistants and Associates with delegated responsibilities assigned to them by the Practitioners they work alongside. This may include training and supervision of other team members.

To become a Healthcare Science Practitioner apprentices would have to progress from their Level 3 apprenticeship to undertake further learning. Details are given below for the route through the Level 4 apprenticeship to professional registration. Alternatively, they may undertake a specific qualification, often a 3-year full time/5-year part time university Degree, which, on completion, would enable them to register on the appropriate professional register, such as with the Health and Care Professions Council (HCPC) or the Academy for Healthcare Science.

Further detailed information and advice on careers within the health sector can be found at <http://www.wales.nhs.uk/>

Level 4

Progression routes into the Apprenticeship:

See Entry Requirements

Progression from the Apprenticeship:

On completion of this pathway, learners may progress onto further qualifications specific to their work context. A wide range of qualifications are available for use within the health sector. These may include further qualifications, a range of higher education qualifications or other work-related education and training to support Continuing Professional Development.

Progression should not just be seen as vertical. In some instances, progressing into another role at the same level may be just as rewarding as it offers the opportunity to develop new skills and knowledge.

Many Apprentices will complete their apprenticeships and continue to work as Healthcare Science Associates with delegated responsibilities assigned to them by the practitioners they work alongside. This may include teaching and supervision of other team members.

To become a Healthcare Science Practitioner apprentices would have to progress from their apprenticeship to undertake a specific qualification to enable them to register with either the Health and Care Professions Council (HCPC) or the Academy for Healthcare Science. Currently the route is a 3-year full time university Degree but Apprentices who have achieved this Level 4 qualification may be able to obtain recognition of prior learning (RPL) when applying for an appropriate Health Professional undergraduate course. This will be at the discretion of the receiving HEI. From 2024 onwards it is planned that Apprentices who have achieved this Level 4 qualification and are working within Pathology, Audiology or Clinical Engineering will be able to progress to access HEI to undertake Level 5 and Level 6 education on a part time basis to gain the required Degree

Further detailed information and advice on careers within the health sector can be found at <http://www.wales.nhs.uk/>

EQUALITY & DIVERSITY

It is important that apprenticeship Pathways are inclusive and can demonstrate an active approach to identifying and removing barriers to entry and progression. Pathways should advance equality of opportunity between persons who share protected characteristics and those persons who do not as identified in the Equality Act 2010.

The protected characteristics identified in the Equality Act are age, disability, gender re-assignment, race, religion or belief, sex, sexual orientation, pregnancy and maternity. Marriage and civil partnership is also included although only in respect of the requirement to eliminate discrimination in employment.

Training providers and employers MUST also comply with the other duty under the Equality Act 2010 to ensure that applicants are not discriminated against in terms of entry to the industry based upon those nine protected characteristics.

Across all of the Healthcare Science disciplines the Support Worker workforce is predominately female (75.3%) apart from Clinical Engineering which is predominately male (78%). 23% of the Healthcare Science Support Worker workforce is over the age of 55 with a similar percentage being under the age of 30. (Data drawn from Electronic Staff Record Data Warehouse January 2022). Promotion of the Healthcare Science professions to younger males is important and this Healthcare Science Apprenticeship Framework can help Employers attract and recruit those individuals who may not be aware of the many healthcare science roles within healthcare. It is equally important that we must increase the numbers of Welsh speakers in healthcare and improve access to services through the medium of Welsh. This will meet the Government expectation of More than Just Words and the Active Offer where people are offered and can receive their support through the medium of Welsh if they want to.

Apprentices undertaking this pathway may also be adult learners who may have been away from education for a considerable period of time. It is therefore important that the education/training provider delivering this pathway has support systems in place to maximise learners' potential and to ensure that their educational needs are met by developing a personalised learning programme. Healthcare apprentices undertaking this pathway must be made aware of all the learner support services available to them. There should be open recruitment of apprentices to the programme, which is available to all people, regardless of gender, ethnic origin, religion/belief, sexual orientation or disability who meet the stated selection criteria. Employers/providers must be able to demonstrate that there are no overt or covert discriminatory practices in selection and employment. All promotional, selection and training activities must comply with the following relevant legislation such as:

- The Equality Act 2010
- The Welsh Language Act 1993
- The Care Standards Act 2000
- Data Protection Act 1998
- Employment Right Act 1996
- Health and Safety at Work Act 1974
- Human Rights Act 1998
- Public Interest Disclosure Act 1998 (Whistle Blowing Charter)
- Rehabilitation of Offenders Act 1974-1986
- Amendment Sexual Discrimination Act 1976
- Additional Learning Needs and Education Tribunal (Wales) Act 2018

EMPLOYMENT RESPONSIBILITIES AND RIGHTS (ERR)

Employment Responsibilities and Rights (ERR) is no longer compulsory. But it is recommended that all apprentices (especially the 16 years -18 year group) receive a company induction programme.

RESPONSIBILITIES

It is the responsibility of the Training Provider and Employer to ensure that the requirements of this pathway are delivered in accordance with the Welsh Government Apprenticeships Guidance.

Further information may be obtained from:

Welsh Government

DfES-ApprenticeshipUnit@gov.wales

Annex 1

Level 3 Diploma in Healthcare Science [Qualification \(Agored Cymru.cymru\)](http://Qualification (Agored Cymru.cymru))

Audiology - Mandatory Group with Mandatory Units	Level	Credit	credit for competence	credit for knowledge
Maintaining Quality Standards in the Health Sector	Three	2	0	2
Fundamental Skills for Work Based Practice within Healthcare Science Settings in the NHS in Wales	Three	16	5	11
Audiology - Mandatory Group with Optional Units				
Anatomy and Physiology of the Ear	Two	2	0	2
Basic Hearing Screening and Assessment	Three	4	3	1
Earwax Management	Four	6	4	2
Fitting and Verification of Hearing Aids using Probe Microphone Measurements	Four	4	2	2
Hearing Aid Technology and Instruction	Three	3	1	2
Assisting with Paediatric Behavioural Testing	Three	4	2	2
Hearing Aid Repair and Maintenance	Three	6	4	2
Audiology - Optional Group with Optional Units				
Promote good practice in handling information in health and social care settings	Three	2	1	1
Spreadsheet Techniques	Two	3	3	0
Word Processing Techniques	Two	3	3	0
Networking Principles	Three	10	3	7
Digital Networks Environments	Three	6	3	3
Digital Communications	Three	6	6	0
Digital Information Management	Three	6	4	2
Select and Set Up Digital Systems	Two	3	2	1
Digital Responsibility	Two	2	1	1
Data Analysis	Three	11	6	5
Working within Multidisciplinary, Primary, Secondary and/or Community Teams	Three	4	1	3
General Anatomy and Physiology and Related Diagnostic Tests	Three	4	0	4
Undertake Physiological Measurements	Three	3	2	1
Physiology - Mandatory Group with Mandatory Units				
Maintaining Quality Standards in the Health Sector	Three	2	0	2
Fundamental Skills for Work Based Practice within Healthcare Science Settings in the NHS in Wales	Three	16	5	11
Physiology - Mandatory Group with Optional Units				
General Anatomy and Physiology and Related Diagnostic Tests	Three	4	0	4
Anatomy, Physiology and Pathology - The Cardiovascular and Respiratory Systems (M)	Three	8	0	8

Ambulatory Electrocardiogram (ECG) Monitoring – Fitting and Removing Monitors	Three	4	3	1
Ambulatory Blood Pressure Monitoring – Fitting and Removing Monitors	Three	4	3	1
Performing a Resting 12-Lead Electrocardiogram (ECG)	Three	6	4	2
Assist in Cardiac Exercise Tolerance Testing	Three	6	4	2
ECG Abnormalities (M)	Three	8	6	2
Recording Manual and Automated Blood Pressure	Three	2	2	0
Undertake Physiological Measurements	Three	3	2	1
Healthcare Science Assistant: Undertaking Spirometry	Three	3	2	1
Physiology - Optional Group with Optional Units				
Promote good practice in handling information in health and social care settings	Three	2	1	1
Spreadsheet Techniques	Two	3	3	0
Word Processing Techniques	Two	3	3	0
Networking Principles	Three	10	3	7
Digital Networks Environments	Three	6	3	3
Digital Communications	Three	6	6	0
Digital Information Management	Three	6	4	2
Select and Set Up Digital Systems	Two	3	2	1
Digital Responsibility	Two	2	1	1
Data Analysis	Three	11	6	5
Working within Multidisciplinary, Primary, Secondary and/or Community Teams	Three	4	1	3
General Anatomy and Physiology and Related Diagnostic Tests	Three	4	0	4
Undertake Physiological Measurements	Three	3	2	1
Genetics - Mandatory Group with Mandatory Units				
Genetics and Genomics in Health Care Sciences	Three	26	19	7
Genetics - Optional Group with Optional Units				
Maintaining Quality Standards in the Health Sector	Three	2	0	2
Fundamental Skills for Work Based Practice within Healthcare Science Settings in the NHS in Wales	Three	16	5	11
Genetics - Mandatory Group with Optional Units				
Promote good practice in handling information in health and social care settings	Three	2	1	1
Spreadsheet Techniques	Two	3	3	0
Word Processing Techniques	Two	3	3	0
Networking Principles	Three	10	3	7
Digital Networks Environments	Three	6	3	3
Digital Communications	Three	6	6	0
Digital Information Management	Three	6	4	2
Select and Set Up Digital Systems	Two	3	2	1
Digital Responsibility	Two	2	1	1
Data Analysis	Three	11	6	5
Working within Multidisciplinary, Primary, Secondary and/or Community Teams	Three	4	1	3
General Anatomy and Physiology and Related Diagnostic Tests	Three	4	0	4

Undertake Physiological Measurements	Three	3	2	1
Pathology - Mandatory Group with Mandatory Units				
Maintaining Quality Standards in the Health Sector	Three	2	0	2
Fundamental Skills for Work Based Practice within Healthcare Science Settings in the NHS in Wales	Three	16	5	11
Pathology - Mandatory Group with Optional Units				
Cleaning, decontamination and waste management	Two	2	0	2
Despatch biomedical samples	Three	4	2	2
Dispose safely of biomedical Specimens and Samples	Three	3	2	1
Investigate biomedical specimens/samples at a microscopic level	Three	4	2	2
Monitor and maintain the environment and resources during and after clinical/therapeutic activities	Two	3	2	1
Perform biomedical specimen/sample preparation	Three	3	2	1
Perform standards tests on biomedical specimens/samples using manual methodologies or commercial kits	Three	3	2	1
Stain biomedical specimens and samples	Three	3	2	1
Store biomedical specimens and samples	Two	2	1	1
Pathology - Optional Group with Optional Units				
Promote good practice in handling information in health and social care settings	Three	2	1	1
Spreadsheet Techniques	Two	3	3	0
Word Processing Techniques	Two	3	3	0
Networking Principles	Three	10	3	7
Digital Networks Environments	Three	6	3	3
Digital Communications	Three	6	6	0
Digital Information Management	Three	6	4	2
Select and Set Up Digital Systems	Two	3	2	1
Digital Responsibility	Two	2	1	1
Data Analysis	Three	11	6	5
Working within Multidisciplinary, Primary, Secondary and/or Community Teams	Three	4	1	3
General Anatomy and Physiology and Related Diagnostic Tests	Three	4	0	4
Undertake Physiological Measurements	Three	3	2	1
Clinical Engineering - Mandatory Group with Mandatory Units				
Maintaining Quality Standards in the Health Sector	Three	2	0	2
Fundamental Skills for Work Based Practice within Healthcare Science Settings in the NHS in Wales	Three	16	5	11
Clinical Engineering - Mandatory Group with Optional Units				
Conduct Routine Maintenance on Clinical Equipment	Three	7	4	3
Ionising Regulation and Protection	Three	5	0	5
Rehabilitation engineering - manufacture, modification, fabrication and repair	Three	9	7	2
Radiotherapy Equipment Servicing	Three	7	5	2

Promote Good Practice in Handling Information in Health and Social Care Settings	Three	2	1	1
Clinical Engineering - Optional Group with Optional Units				
Promote good practice in handling information in health and social care settings	Three	2	1	1
Spreadsheet Techniques	Two	3	3	0
Word Processing Techniques	Two	3	3	0
Networking Principles	Three	10	3	7
Digital Networks Environments	Three	6	3	3
Digital Communications	Three	6	6	0
Digital Information Management	Three	6	4	2
Select and Set Up Digital Systems	Two	3	2	1
Digital Responsibility	Two	2	1	1
Data Analysis	Three	11	6	5
Working within Multidisciplinary, Primary, Secondary and/or Community Teams	Three	4	1	3
General Anatomy and Physiology and Related Diagnostic Tests	Three	4	0	4
Undertake Physiological Measurements	Three	3	2	1

Level 3 Diploma in Clinical Imaging Support (Wales) [Qualification \(Agored Cymru.cymru\)](http://Agored.Cymru.cymru)

Mandatory Units	Level	Credit	credits for competency	credits for knowledge
Cleaning, Decontamination and Waste Management	Two	2	0	2
Clinical Imaging: Anatomy and Terminology	Three	3	0	3
Fundamentals of Care in Clinical Imaging	Three	6	3	3
Introduction to Duty of Care in Healthcare Settings	Two	1	0	1
Ionising Regulation and Protection	Three	4	0	4
Promote and Implement Health and Safety in Healthcare Settings	Three	5	2	3
Promote Communication in Healthcare Settings	Three	3	2	1
Resilience and Stress Management	Two	2	0	2
Principles of Infection Prevention and Control	Two	3	0	3
Understanding and Assisting with Radiology IT systems	Two	3	2	1
Optional Units				
Engage in Personal Development	Three	3	2	1
Perform Intravenous Cannulation	Three	4	3	1
Dementia Awareness	Two	2	0	2
Chaperoning	Two	1	0	1
Conducting Quality Audits	Three	4	3	1
Recognition of the Deteriorating Patient	Four	3	2	1
Supporting and Managing Customers	Two	2	1	1
Supporting Learning in the Workplace	Three	2	1	1
Use of Contrast Media in Clinical Imaging	Three	2	0	2
Understanding and Assisting within the Interventional Radiology Environment	Three	3	2	1

Understanding and Assisting within a Computerised Tomography Environment	Three	3	2	1
Clinical Imaging Support Worker: Understanding and Assisting within a Magnetic Resonance Imaging (MRI) Environment	Three	4	2	2
Understanding and Assisting within an Ultrasound Environment	Four	4	2	2
Understanding and Assisting within the Fluoroscopy Environment	Three	2	1	1
Understanding and Assisting within the Nuclear Medicine Imaging Environment	Three	6	2	4

Level 3 Principles of Aseptic Pharmaceuticals Processing [127052 \(openawards.org.uk\)](https://openawards.org.uk/127052)

Mandatory Units	Level	Credits	Credits for competency	Credits for knowledge
Aseptic Manufacture and Preparation Processes	Three	12	3	9
Clean Room Design and Behaviours	Three	3	0	3
Health, Safety and Reducing Risk in Aseptic Pharmaceuticals	Three	4	1	3
Legislation, Regulations and Standards in Aseptic Pharmaceuticals	Three	6	2	4
Maintenance and Calibration in Aseptic Pharmaceuticals	Three	3	0	3
Quality Management in Aseptic Pharmaceuticals	Three	6	0	6
Roles, Responsibilities and Professional Development in Aseptic Pharmaceuticals	Three	4	0	4
Science in Aseptic Processing	Three	12	0	12
Stock Management in Aseptic Pharmaceuticals	Three	3	0	3
Documentation in Aseptic Processing	Three	3	0	3

Annex 2

Pearson BTEC Level 4 Diploma in Healthcare Science [BTEC Level 4 Diploma in Healthcare Science Specification \(pearson.com\)](https://www.pearson.com/qualifications/btec/level-4-diploma-in-healthcare-science)

Mandatory Units	Level	Credit	credits for competency	credits for knowledge
Skills for Lifelong Learning	Four	2	2	0
Professional Practice and Person Centred Care	Four	5	3	2
Legal and Ethical Context of Practice	Four	3	1	2
Health, Safety and Security in the Healthcare Science Environment	Four	3	2	1
Technical Scientific Services	Four	5	4	1
Effective Communication in Healthcare	Four	4	2	2
Audit, Research, Development and Innovation	Four	5	3	2
Leadership and Teamwork	Four	3	1	2
Teaching, Learning and Assessing Practical Skills	Four	4	3	1
Continuing Personal and Professional Development	Four	4	4	0
Optional Units	Four			
Scientific Basis of Healthcare Science: Clinical Science	Four	25	0	25
Scientific Basis of Healthcare Science: Genetics and Genomics and Clinical Bioinformatics	Four	10	0	10
Scientific Basis of Healthcare Science: Pharmacology and Therapeutics	Four	5	0	5
Scientific Basis of Healthcare Science: Epidemiology and Public Health	Four	10	0	10
Scientific Basis of Healthcare Science: Mathematics, Statistics and Physical Sciences	Four	10	3	7
Point of Care Testing	Four	5	3	2
The Building Blocks of Life	Four	20	0	20
The Science Behind the Cure	Four	20	0	20
General Laboratory Practice	Four	11	10	1
Procedures for Witnessing in the HFEA-licensed Fertility Clinic	Three	2	1	1
Check Documentation of Consent in the HFEA-licensed Fertility Clinic	Three	3	1	2
Identify and Instruct Individuals Providing Semen Samples in the HFEA-licensed Fertility Clinic	Three	3	1	2
Laboratory Practice in the HFEA-licensed Reproductive Science Laboratory	Four	3	2	1
Principles and Organisation of Services in the HFEA-licensed Fertility Clinic	Four	3	0	3
Reproductive Sciences: Human Body Systems – Biological Basis of Reproductive Systems	Four	4	0	4

Prepare Culture Systems for Gametes and Embryos in the HFEALicensed Reproductive Science Laboratory	Four	5	3	2
Prepare Documents for the Transport of Gametes and Embryos to and from Other Fertility Clinics	Four	5	2	3
Semen Assessment	Four	5	2	3
Clinical Biochemistry in Practice	Four	30	10	20
Haematology in Practice	Four	30	10	20
Clinical Immunology in Practice	Four	30	10	20
Histocompatibility and Immunogenetics in Practice	Four	30	10	20
Transfusion Science – Blood Transfusion in Practice	Four	30	10	20
Transfusion Science – Stem Cell and Tissue Transplantation	Four	30	10	20
Histology in Practice	Four	30	10	20
Cytology in Practice	Four	30	10	20
Microbiology in Practice	Four	30	10	20
Virology in Practice	Four	30	10	20
Principles and Practice of Decontamination Science	Four	5	1	4
Preparation of Medical Devices for the Cleaning and Disinfection Process	Four	5	4	1
Cleaning and Disinfection of Medical Devices: Manual Processes	Four	5	4	1
Cleaning and Disinfection of Medical Devices: Automated Processes	Four	5	3	2
Inspection, Assembly, Packaging of Medical Devices in a Controlled Environment	Four	10	6	4
Terminal Processing including Sterilisation and High-Level Disinfection	Four	5	4	1
Testing, Maintenance and Breakdown Management of Decontamination Equipment	Four	5	4	1
Principles and Practice of Flexible Endoscope Decontamination	Four	6	4	2
The role of the Genetic Counsellor	Four	5	1	4
Genetics and Genomics in Practice	Four	30	10	20
Scientific Basis of Cardiovascular, Respiratory and Sleep Science: Cardiac Embryology, Anatomy and Physiology	Four	15	0	15
Scientific Basis of Cardiovascular, Respiratory and Sleep Science: Anatomy, Histology and Physiology of the Respiratory System	Four	15	0	15
Scientific Basis of Cardiovascular, Respiratory and Sleep Science: Scientific Basis of Respiratory Disorders of Sleep	Four	10	0	10
Principles of Ultrasound	Four	3	0	3
Recognising ECG Abnormalities in Adults	Four	10	5	5
Ambulatory ECG Monitoring	Four	20	14	6
Ambulatory Blood Pressure Monitoring	Four	15	7	8
Assist in Cardiac Stress Testing	Four	6	4	2
Introduction to Congenital Heart Disease	Four	4	0	4

Recognising ECG Abnormalities in Children	Four	10	6	4
Spirometry and Bronchodilator Response in Adults	Four	10	7	3
Measurement of Single Breath Gas Transfer	Four	15	12	3
Sleep Diagnostics	Three	10	6	4
Spirometry, Static Lung Volumes and Bronchodilator Response in Children	Four	15	11	4
Scientific Basis of Neurosensory Sciences: Applied Physics and Measurement	Four	15	0	15
Scientific Basis of Neurosensory Sciences: Applied Anatomy, Physiology and Pathophysiology: The Nervous System	Four	10	0	10
Scientific Basis of Neurosensory Sciences: Applied Anatomy, Physiology and Pathophysiology: The Ear	Four	5	0	5
Adult Hearing Screening and Assessment	Four	25	13	12
Hearing Aid Repair and Maintenance	Four	15	10	5
Assisting with Electroencephalography	Four	15	9	6
Performing Machine Function Tests	Four	7	5	2
Assist in the Recording of Visual Evoked Potentials	Four	6	5	1
Assist in the Recording of Visual Electrophysiological Investigations	Four	6	5	1
Assist during Nerve Conduction Studies and Electromyography	Four	6	5	1
Ophthalmic and Vision Science: Applied Microbiology	Four	6	0	6
Ophthalmic Pharmacology	Four	6	0	6
Instil Eye Medication for Purpose of Investigation or Treatment	Four	5	5	0
Anatomy, Physiology and Pathophysiology of the Visual System	Four	6	0	6
Imaging the Posterior Segment of the Eye	Four	6	4	2
Measure Visual Acuity	Three	3	1	2
Visual Field Assessment	Three	5	3	2
Measure Optical Prescriptions and Refractive Error	Three	5	3	2
Introduction to Gastrointestinal Physiology	Four	5	2	3
Performing a Breath Test for Carbohydrate Malabsorption	Four	8	6	2
Performing Percutaneous Tibial Nerve Stimulation (PTNS) in Patients with Faecal and Urinary Incontinence Overactive Bladder (OAB)	Four	12	8	4
24 Hour Upper Gastrointestinal Physiology Studies: Post-recording Management Studies	Four	10	8	2
Assist in Post Sacral Nerve Stimulation Implantation Follow-up Clinics	Four	6	4	2
Preparing Equipment for Ambulatory 24 Hour Monitoring, including pH and Combined pH/Impedance Studies	Four	6	4	2
Preparing Lower GI Equipment: High Resolution Anorectal Manometry	Four	6	4	2
Preparing Lower GI Equipment: Endoanal Ultrasound	Four	6	4	2
The Urinary System	Four	6	0	6

Performing Urine Dip Stick Analysis	Four	7	4	3
Ultrasound Measurement of PostVoid Residual Urine	Four	12	9	3
Assisting with Standard Urodynamic Studies	Four	10	6	4
Assisting with Flowmetry Studies	Four	10	6	4
Introduction to Autonomic Science	Four	8	0	8
Assist in Performing Tilt Testing	Four	6	5	1
Withdrawal of Blood from an Indwelling Peripheral Cannula	Four	2	1	1
Assist with the Assessment of Plasma Catecholamine and Biochemical Levels	Four	7	3	4
Assist in Performing Situational Provocation Testing	Four	7	4	3
Peripheral Intravenous Cannulation as Part of Autonomic Testing	Five	7	3	2
Introduction to Vascular Science	Four	3	0	3
Measuring Ankle Brachial Pressure Index	Three	2	1	1
Measurement of Post-Exercise Ankle Brachial Pressure Index	Four	6	2	4
Scientific Basis of Physical Sciences: Mathematics, Statistics and Informatics	Four	10	5	5
Scientific Basis of Engineering: Electrical and Basic Electronics	Four	15	10	5
Scientific Basis of Engineering: Basic Mechanics	Four	15	4	11
Scientific Basis of Medical Physics	Four	30	0	30
Clinical Engineering Workshop Skills	Four	4	3	1
The Medical Equipment Lifecycle	Four	6	4	2
Acceptance Testing of New Medical Equipment	Four	6	5	1
Planned Preventive Maintenance	Four	4	3	1
Diagnosing and Rectifying Equipment Faults	Four	4	4	0
Decommissioning and Disposal of Medical Equipment	Four	6	4	2
Medical Engineering in Practice	Four	15	11	4
Rehabilitation Engineering in Practice	Four	15	12	3
Renal Technology in Practice	Four	15	10	5
Ionising Radiation Engineering in Practice	Four	15	9	6
Working Practices in Physical Sciences	Four	5	3	2
Radiotherapy Physics in Practice	Four	20	16	4
Nuclear Medicine in Practice	Four	20	16	4
Radiation Physics in Practice	Four	20	16	4
Introduction to Data Science and Data Management in Healthcare	Four	10	5	5
Introduction to Clinical Bioinformatics (Genomics)	Four	10	8	2
Introduction to UNIX	Four	3	2	1
Safe Use of Information Communication Technology within the Clinical Environment	Four	10	2	8
Informatics for Physical Sciences	Four	9	6	3
Technical Support for Computerised Medical Devices	Four	10	6	4
Project Management	Four	5	5	0
Clinical Bioinformatics in Practice (Cancer Genomics)	Four	20	5	15
Clinical Bioinformatics in Practice (Infectious Diseases)	Four	20	5	15
Clinical Bioinformatics in Practice (Rare Diseases)	Four	20	5	15

Measurement of Toe Pressure by Photoplethysmography (PPG)	Four	10	7	3
Measurement of Transcutaneous Oxygen (TCPO2)	Four	10	7	3
Measuring Peripheral Oxygen Saturation	Four	10	6	4
Performing Routine Electrocardiography in Adults	Three	3	2	1
Sleep Therapy	Four	10	5	5
Measurement of Static Lung Volumes in Adults	Four	12	9	3