Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)

Specification date: September 2020
First assessment date: December 2021
Issue 2

PEARSON

Skills for Health

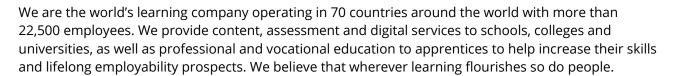## Pearson and apprenticeships

For new standards and on-programme learning, Pearson as the UK's largest awarding body is able to provide a range of qualifications, programmes and assessments, including BTECs that are globally recognised and benchmarked. As an approved assessment organisation for end-point assessment for a range of standards, Pearson provides assessment services in line with approved assessment plans. For further information, please visit our website at qualifications.pearson.com. Alternatively, you can get in touch with us using the details on our contact us page at qualifications.pearson.com/contactus

About Pearson

We are the world's learning company operating in 70 countries around the world with more than 22,500 employees. We provide content, assessment and digital services to schools, colleges and universities, as well as professional and vocational education to apprentices to help increase their skills and lifelong employability prospects. We believe that wherever learning flourishes so do people.

This document is Issue 2. Key changes are summarised on the next page. We will inform centres of any changes to this issue.

The Skills for Health logo on the front cover signifies that this qualification meets Skills for Health qualification design criteria.

Summary of changes to Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship) Issue 2

Summary of changes made between previous issue and this issue	Page number
First assessment date changed from June 2022 to December 2021.	Cover

If you need further information on these changes or what they mean, please contact us via our website at: qualifications.pearson.com/en/contact-us.html.

Contents

Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)

Introduction

This document is the specification for the Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship).

Pharmacy Technicians are registered professionals working within the regulatory standards for pharmacy, as set by the General Pharmaceutical Council (GPhC) Pharmacy Order 2010.

Pharmacy Technicians work in a wide range of settings, including (but not exclusively): registered pharmacies, community services, justice (the Prison Service), GP practices, dispensing doctors' practices, care homes and clinical commissioning groups, hospitals, mental health, defence (HM Armed Services) and within the pharmaceutical industry.

Pharmacy Technicians manage the supply of medicines and devices in a pharmacy and assist pharmacists with advisory services. The actual work setting will determine the specific areas of activity that the Pharmacy Technician undertakes, but typically their role will include the following:

- providing safe and effective pharmacy services

- supplying medicines and devices to patients, whether on prescription or over the counter

- achieving the best outcomes through a patient's medicines

- assembling medicines for prescriptions

- providing information to patients and other healthcare professionals

- managing areas of medicines supply such as dispensaries

- supervising other pharmacy staff

- answering customers questions face to face or by phone

- pre-packing, assembling and labelling medicines

- referring problems or queries to the pharmacist.

A Pharmacy Technician is responsible for carrying out both routine and specialist services, including highly complex activities requiring them to use their professional judgement. They are expected to work both individually and as part of a multidisciplinary team. They are able to work with minimum supervision, with a high degree of autonomy, taking responsibility for the quality and accuracy of the work that they have undertaken and that of others.

Pharmacy Technicians are expected to communicate effectively with healthcare professionals, patients and the public, whilst respecting and maintaining confidentiality and privacy.

The Pearson Level 3 Pharmacy Technician Apprenticeship is one of the routes to registration as a Pharmacy Technician in Great Britain.

The organisations involved in the apprenticeship are:

1. General Pharmaceutical Council (GPhC): The GPhC is the regulator for pharmacy in Great Britain and is responsible for setting the initial education and training standards for Pharmacy Technician qualifications and/or programmes leading to registration. These standards are set out in *Standards for the Initial Education and Training of Pharmacy Technicians* (2017).

2. The Institute for Apprenticeships and Technical Education (IfATE): The IfATE has oversight of apprenticeship standards on behalf of government and is, therefore, responsible for approving the content of the Pharmacy Technician Apprenticeship Standard. The standard was developed by the Pharmacy Trailblazer Group, in line with GPhC requirements for the initial education and training of Pharmacy Technicians.

Please note: the use of **'individuals'** throughout this specification refers to those requiring care and support, and may include patients, service users or clients.

1 Introducing the Integrated Qualification and End-point Assessment

Overview

This qualification forms both the on-programme learning phase of the apprenticeship and the End-point Assessment (EPA). Apprentices who complete this qualification will be eligible to claim a full apprenticeship certificate.

The on-programme units are designed to develop the knowledge and skills that apprentices need to carry out the role of a Pharmacy Technician. The EPA units then confirm the apprentice's competence in the role after the apprentice has gone through gateway (*see section 10*).

The qualification has been developed using the Pharmacy Technician Apprenticeship Standard and Assessment Plan.

The typical duration for the apprenticeship is 24 months but this will depend on the apprentice's previous experience and access to opportunities to gain the full range of competences. If, however, the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, then EPA can begin around month 21. It must be ensured that in doing so the whole duration of the apprenticeship, including the EPA window is not less than the mandated 24 months.

The overall qualification is graded as Fail/Pass/Distinction.

The published Pharmacy Technician Standard and Assessment Plan is available at www.instituteforapprenticeships.org/apprenticeship-standards/

Collaborative Development

Pearson has worked in close collaboration with employers, other assessment organisations and experts from professional bodies and training providers in developing the assessment tools for the integrated end-point assessment. We are grateful to all who have generously shared their time and expertise to help us in the development process.

Employers, assessment organisations, professional bodies and further education providers that have worked with us include *Skills for Health*.

2 Qualification summary and key information

Qualification title	Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (integrated apprenticeship)
Qualification Number (QN)	603/6304/6
Regulation start date	01/09/2020
Operational start date	01/09/2020
Total Qualification Time (TQT)	1327.5 hours
Guided Learning Hours (GLH)	788
Approved age ranges	16–18 19+ Please note that sector-specific requirements or regulations may prevent apprentices of a particular age from embarking on this qualification. Please refer to the assessment requirements in _Section 9 Assessment_.
Assessment	Units 1-21: Portfolio of evidence (internal assessment) Unit 22: Professional discussion (external assessment) Unit 23: Observation with question and answer session (external assessment)
Grading information	The overall qualification is graded Fail/Pass/Distinction. Please see _Section 5 Grading_ for further information
Entry requirements	In order to register for this qualification, apprentices must be currently working in a pharmacy environment, having secured a placement as a Pharmacy Technician Apprentice. Apprentices must have GCSE pass grades (C or above) or equivalent qualifications in English, mathematics and science, an acceptable reference. Centres must follow the guidance given in the document _A guide to recruiting learners onto Pearson qualifications_ (see _Section 8 Access and recruitment_).

3 Qualification purpose

Qualification objectives

The Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (integrated apprenticeship) is for apprentices who are employed in the role of Pharmacy Technician apprentices.

The qualification gives apprentices the opportunity to:

- develop the fundamental technical skills and underpinning knowledge and understanding required to become competent in the job role. For details of the units included in this qualification, please see *Section 4 Qualification structure*

- develop appropriate professional attitudes and behaviours that will support personal success in their job role and the long-term success of their organisation

- develop a range of interpersonal and intrapersonal skills to support progression to, and success in, further study and career advancement

- achieve a nationally recognised Level 3 qualification, recognised by the General Pharmaceutical Council (GPhC)

- register with the General Pharmaceutical Council (GPhC) as a Pharmacy Technician, and therefore be allowed to practice as a Pharmacy Technician in England and Wales.

Relationship with other qualifications

This qualification replaces the Pearson BTEC Level 3 Diploma in Pharmaceutical Science and the Pearson Edexcel Level 3 NVQ Diploma in Pharmacy Service Skills.

The Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians contains the on-programme part of this qualification and is suitable for non-apprenticeship learners.

Progression opportunities

Apprentices who achieve the Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship) can apply for professional registration as Pharmacy Technicians. In the longer term, apprentices can progress to more senior or complex job roles in pharmacy or the healthcare sector.

Industry support and recognition

The Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship) was developed through close collaboration with Skills for Health (SfH), the Sector Skills Council for Health for the UK health sector and several awarding organisations.

This qualification is supported by the General Pharmaceutical Council (GPhC) and Skills for Health (SfH).

4   Qualification structure

Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)

Before the qualification can be awarded, apprentices will need to achieve all 23 of the mandatory units for both on-programme and End-point Assessment listed in the table below. The on-programme units must be achieved before Gateway and the End-point Assessment units must be completed after Gateway *(see Section 9).*

Unit number	Mandatory on-programme units	Level	Credit	Guided Learning Hours	Grade points
1	Principles of Person-centred Approaches for Pharmacy Technicians	3	5	30	10
2	Principles of Health and Safety for Pharmacy Technicians	3	2	10	10
3	Personal Development for Pharmacy Technicians	3	5	25	10
4	Principles of Health Promotion and Wellbeing in Pharmacy Services	3	5	35	10
5	Contribute to Service Improvement in the Delivery of Pharmacy Services	3	6	30	10
6	Principles for the Management of Pharmaceutical Stock	3	8	65	10
7	Undertake Medicines Reconciliation and Supply	4	12	60	10
8	Assemble and Check Dispensed Medicines and Products	4	8	30	10
9	Receive, Validate and Issue Prescriptions	3	10	40	10
10	Chemical Principles for Pharmacy Technicians	3	3	20	10
11	Biological Principles for Pharmacy Technicians	3	4	25	10

Unit number	Mandatory on-programme units	Level	Credit	Guided Learning Hours	Grade points
12	Medicinal and Non-medicinal Treatments for Gastrointestinal and Nutritional Conditions	3	5	35	10
13	Medicinal Treatments for Cardio-respiratory Conditions	3	6	40	10
14	Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions	3	6	40	10
15	Microbiology for Pharmacy Technicians	3	5	30	10
16	Actions and Uses of Medicines	3	9	60	10
17	Medicinal and Non-medicinal Treatments for Central Nervous System Conditions	3	6	30	10
18	Medicinal Methods for the Prevention, Protection from and Treatment of Infections	3	6	40	10
19	Medicinal Treatments for Endocrine, Gynaecological and Genitourinary Conditions	3	6	40	10
20	Medicinal Treatments for Sensory Organ Conditions	3	5	30	10
21	Principles of Safe Manufacture of Quality Medicines in the Pharmaceutical Environment	3	10	70	10

Unit number	Mandatory End-point Assessment units	Level	Credit	Guided Learning Hours	Grade points	
					P	**D**
22	Professional Discussion End-point Assessment for Pharmacy Technician Apprentices	3	n/a	1.5	10	15
23	Observation End-point Assessment for Pharmacy Technician Apprentices	3	n/a	1.5	10	

5   Grading

Understanding the qualification grade

Awarding and reporting for the qualification

This section explains the rules that we apply in providing an overall qualification grade for each apprentice. The final grade awarded for the qualification represents a holistic performance across all of the qualification. *Unit 22: Professional Discussion End-point Assessment for Pharmacy Technician Apprentices* is graded Fail/Pass/Distinction (F/P/D), and this determines the overall, summative grade that each apprentice is awarded for the integrated qualification through a holistic assessment of the apprenticeship. All other units in the qualification are graded Fail/Pass.

Because this is an integrated apprenticeship, this grading approach has been mandated by the Assessment Plan published by the Institute for Apprenticeships (IfATE), available on their website.

The awarding and certification of these qualifications will comply with the requirements of the Office of Qualifications and Examinations Regulation (Ofqual).

Eligibility for an award

In order to be awarded the qualification, a learner must complete all units and achieve a Pass or above in all units. See the structure in *Section 4* for full details.

To achieve the qualification grade, apprentices must:

- achieve and **report a grade** (Fail or Pass) for all units
- achieve the **minimum number of points** at a grade threshold.

Apprentices who do not pass all units shown in the structure will not achieve the qualification.

Calculation of the qualification grade

The final grade awarded for the qualification represents an aggregation of an apprentice's performance across the qualification.

The qualification is awarded at the grade ranges shown in the table below.

Qualification	Available grade range
Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)	P to D

The *Calculation of qualification grade* table, which appears later in this section, shows the minimum thresholds for calculating these grades. The table will be kept under review over the lifetime of the qualification. In the event of any change, centres will be informed before the start of teaching for the relevant cohort and an updated table will be issued on our website.

Apprentices who do not meet the minimum requirements for a qualification grade to be awarded will be recorded as Fail and will not be certificated.

Points available for internally assessed units

The table below shows the number of **points** available for internally assessed units. For each internally assessed unit, points are allocated depending on the grade awarded.

	Internal units
Fail	0
Pass	10

Points available for the externally assessed units

Raw marks from the externally assessed units will be awarded **points** based on performance in the assessment. The points scores available for each externally assessed unit at grade boundaries are as follows.

	External units	
	Professional Discussion	Observation
Fail	0	0
Pass	10	10
Distinction	15	n/a

Calculation of qualification grade table

Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)	
Grade	Points threshold
P	230
D	235

Examples of grade calculations

Example 1: Achievement of the *Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)* with a Pass grade

Unit	Type	Grade	Points
1	Internal	Pas1s	10
2	Internal	Pass	10
3	Internal	Pass	10
4	Internal	Pass	10
5	Internal	Pass	10
6	Internal	Pass	10
7	Internal	Pass	10
8	Internal	Pass	10
9	Internal	Pass	10
10	Internal	Pass	10
11	Internal	Pass	10
12	Internal	Pass	10
13	Internal	Pass	10
14	Internal	Pass	10
15	Internal	Pass	10
16	Internal	Pass	10
17	Internal	Pass	10
18	Internal	Pass	10
19	Internal	Pass	10
20	Internal	Pass	10
21	Internal	Pass	10
22	External	Pass	10
23	External	Pass	10
		Pass	**230**

The apprentice has achieved a Pass or above in all units.

The apprentice has sufficient points for a Pass grade.

Example 2: Achievement of the *Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)* with a Distinction grade

Unit	Type	Grade	Points
1	Internal	Pass	10
2	Internal	Pass	10
3	Internal	Pass	10
4	Internal	Pass	10
5	Internal	Pass	10
6	Internal	Pass	10
7	Internal	Pass	10
8	Internal	Pass	10
9	Internal	Pass	10
10	Internal	Pass	10
11	Internal	Pass	10
12	Internal	Pass	10
13	Internal	Pass	10
14	Internal	Pass	10
15	Internal	Pass	10
16	Internal	Pass	10
17	Internal	Pass	10
18	Internal	Pass	10
19	Internal	Pass	10
20	Internal	Pass	10
21	Internal	Pass	10
22	External	Distinction	15
23	External	Pass	10
		Distinction	**235**

The apprentice has sufficient points for a Distinction grade.

Example 3: Achievement of the *Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)* with a Fail result

Unit	Type	Grade	Points
1	Internal	Pass	10
2	Internal	Pass	10
3	Internal	Pass	10
4	Internal	Pass	10
5	Internal	Pass	10
6	Internal	Pass	10
7	Internal	Pass	10
8	Internal	Pass	10
9	Internal	Pass	10
10	Internal	Pass	10
11	Internal	Pass	10
12	Internal	Pass	10
13	Internal	Pass	10
14	Internal	Pass	10
15	Internal	Pass	10
16	Internal	Pass	10
17	Internal	Pass	10
18	Internal	Pass	10
19	Internal	Pass	10
20	Internal	Pass	10
21	Internal	Pass	10
22	External	Fail	0
23	External	Pass	10
		Fail	**220**

The learner has a Fail in Unit 22

The apprentice has not met the requirement for a Pass, or above, in all Units. Therefore, the apprentice is awarded a Fail result.

6 Programme delivery

All centres must have pharmacy professionals involved in the design and the delivery of the programme. The programme must be designed and delivered using strategies that bring together knowledge, competence and work experience. Consideration will need to be given to the order in which the units are delivered, so that apprentices have the underpinning knowledge they need in order to address the competence aspects of the qualification. The knowledge content of the qualification will need to be delivered in a sequence that best supports learning, for example learning outcome 1 from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions* ('Understand different types of human cells and tissue') is a foundation for much of the knowledge in the qualification and should be completed before apprentices move on to the other pharmacology units.

Centres must get the views of a range of stakeholders – including patients, the public and employers – and take account of them when designing and delivering the programme. For example, employers will be able to identify specific areas of knowledge, understanding and skills that are particularly important for Pharmacy Technicians, and may suggest teaching and learning activities that will be of particular value.

Annexe D maps the General Pharmaceutical Council Initial Education and Training (IET) Standards for Pharmacy Technicians to the units in this qualification. The IET standards must be used actively when delivering the qualification. This is to make sure that apprentices know what will be expected of them when they are registered as Pharmacy Technicians. There must be a course teaching and learning strategy that sets out how apprentices will achieve the outcomes in part 1 of the IET standards.

The qualification also meets the standards set out in the Pharmacy Technician Apprenticeship Standard. *Annexe E*: maps the occupation duties and the knowledge, skills and behaviours (KSBs) of the Pharmacy Technician Apprenticeship Standard to the content covered in the on-programme units of learning (*units 1-21*).

Applicants must be currently working as an apprentice in a pharmacy environment and/or have secured a placement as a pre-registration trainee Pharmacy Technician. Applicants should provide evidence they have participated in development opportunities to improve their knowledge, skills and behaviours as outlined in the apprenticeship standard, understood the purpose and importance of end-point assessment, and met all gateway requirements when advised by the employer.

A pre-registration trainee Pharmacy Technician must commence or register for the required qualifications (set out on the *Approved Pharmacy Technician courses* page in the 'Education' section of the GPhC website) within three months of commencing contracted, relevant work experience. In certain circumstances (for example, prolonged serious ill health or maternity or paternity leave) an extension of the two-year qualifying period of work experience may be granted on application to the

registrar if supported by cogent and sufficient evidence. The registrar has the discretion to grant such an extension up to a maximum of one year.

The individual must be directly supervised by a pharmacy professional registered with the General Pharmaceutical Council. It will be important for the applicant to be supported by their supervisor in receiving sufficient training and experience in the workplace in order to work competently and safely as a pre-registration trainee Pharmacy Technician*. Centres must make sure that apprentices have access to specified resources and to the sector specialists delivering and assessing the units. Centres must adhere to the Pearson policies that apply to the different models of delivery. Our *Collaborative and consortium arrangements for the delivery of vocational qualifications policy* document can be found on our website.

There are various approaches to delivering a successful, competence-based qualification; the section below outlines elements of good practice that centres can adopt, as appropriate to the requirements of the programme.

* any further references to *pre-registration Pharmacy Technician* in this specification can be read as a learner employed as an Apprentice.

7 Centre resource requirements

As part of the approval process, centres must make sure that the resource requirements below are in place before offering the qualification.

General resource requirements

- Centres must have the appropriate physical resources to support delivery and assessment of the qualification. Apprentices undertaking this qualification will need access to a pharmacy and to a registered pharmacy professional to act as a supervisor or mentor. These are part of the requirements for registration with the General Pharmaceutical Council. Staff delivering this qualification should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

- Centres must meet any specific human and physical resource requirements outlined in the Assessment Principles in *Annexe A*. Staff assessing apprentices must meet the occupational competence requirements in the Assessment Principles and the staff qualification requirements set out in Appendix 2 of *Annexe A*.

- There must be systems in place to ensure continuing professional development for staff delivering the qualification. All staff delivering the course must understand their role and be given support to carry out their work effectively.

- Centres must have appropriate health and safety policies, procedures and practices in place for the delivery and assessment of the qualification.

Programme and assessment regulations must be appropriate for a programme that leads to professional registration. That is, they must prioritise professionalism, patient safety, and safe and effective practice. This is supported by the requirements of the qualification. For example, learning outcome 2 in *Unit 3: Personal Development for Pharmacy Technicians* explores the concept of professionalism in the role, and in *Unit 8: Assemble and Check Dispensed Medicines and Products*, a minimum of 500 items must be accurately dispensed by the apprentice with no errors being made and self-checked consistently over a period of time in a range of circumstances, with an additional minimum of 500 accurately checked items for checks of others.

The centre's management team must ensure that there are clear and defined structures and processes to manage delivery in an accurate and timely fashion so that the standard is maintained. A schedule of roles and responsibilities must be in operation to ensure that pre-registration trainee Pharmacy Technicians are supported in appropriate learning and training environments and in the workplace. For example, each pre-registration trainee Pharmacy Technician will need to be allocated a supervisor in the workplace, with sufficient expertise to oversee their activities. The centre must establish clear lines of accountability and implement reliable processes for identifying and managing risk. For example, in the workplace, pre-registration trainee Pharmacy Technicians must be made aware of the appropriate person to whom they should refer issues outside their scope of competence.

There must be agreements in place outlining the roles and responsibilities of all those involved in delivering a programme. Agreements must also be in place between centres and the workplace regarding the roles and responsibilities for assessment.

The centre must ensure that that IQA processes are sufficiently robust in order to monitor and evaluate the standard of teaching, learning and assessment to make sure that quality is maintained across all learning environments. It is important that these IQA processes sample the full range of staff, processes and, indirectly, apprentices, to ensure that quality outcomes are maintained. There is no definition of a sample size, but instead this will be dictated by the risk presented by the staff, assessment methods and outcomes. There will be a system of external quality assurance provided by Pearson, which will review the accuracy of the assessment decisions and the influence of IQA processes in order to maintain a secure certification process.

In all the learning and training environments, there must be:

- appropriately qualified and experienced staff (qualification requirements for staff are set out in Appendix 2 of *Annexe A*)
- sufficient staff from relevant disciplines to deliver the programme and support pre-registration trainee Pharmacy Technicians' learning
- sufficient resources to deliver the programme
- facilities that are fit for purpose
- access to appropriate learning resources.

Patient safety must come first in all circumstances. Apprentices must be supervised using an agreed system in all learning and training environments, to ensure patient safety at all times. Apprentices must carry out tasks only in which they are competent, or that they are learning under supervision in which to be competent, so that patient safety is not compromised.

Each apprentice must have a learning agreement covering all the learning and training environments. This must outline roles, responsibilities and lines of accountability, and must say how apprentices will be supported during the programme. Centres must explain how they will be reassured that learning agreements will be implemented in full.

Each apprentice must be supported as a trainee in the workplace. There must be systems in place for liaising with centres regularly on the progress of apprentices.

It is important that apprentices are provided with a clear induction that identifies how the course will be taught and assessed. Apprentices should have a clear understanding of the staff they would speak to for support, guidance and, if necessary, to make an appeal or complaint. Pre-registration trainee Pharmacy Technicians should be suitably supervised in all aspects of their work to ensure that their practice is safe and accurate. Their supervisor should monitor their workload to ensure that it is appropriate and realistic, and reflective of their experience. Time to learn must be sufficient and provide effective opportunity to complete work and collect or produce satisfactory evidence. Apprentices must be supported effectively to be rotated in their roles to ensure that they are exposed to sufficient experiences to complete the qualification. Apprentices must be able to access personal and academic support and the supervisor must signpost this support clearly to apprentices at induction and through the course. The supervisor must ensure that apprentices have sufficient access to resources in order to support their learning and make effective progress. Resources will include (though they are not limited to) appropriate information technology hardware and software, relevant and current textbooks, and rotation in the pharmacy workplace.

Apprentices must receive appropriate and timely feedback on their performance in order to support their development as pre-registration trainee Pharmacy Technicians and professionals.

The following must also be provided for apprentices:

- systems that enable them to meet regularly with workplace colleagues in order to discuss and document their progress

- access to pharmacy professionals who are able to act as role models and give professional support and guidance

- the opportunity to work in multidisciplinary teams.

The supervisor of pre-registration trainee Pharmacy Technicians must be able to provide clear signposting to the support available to them, covering academic study, general welfare and career advice. This support should be discussed at length at induction and revisited frequently throughout the course.

Everyone supporting pre-registration trainee Pharmacy Technicians must take into account the GPhC's guidance on tutoring for pharmacists and Pharmacy Technicians in their work, which can be found here:

https://www.pharmacyregulation.org/sites/default/files/document/guidance_on_supervising_pharmacy_professionals_in_training_august_2018.pdf

All centres and employers must have procedures in place to deal with concerns. Serious concerns that may affect a pre-registration trainee Pharmacy Technician's suitability for future registration, such as inappropriate or criminal behaviour, must be reported to the GPhC. There must also be clear procedures for apprentices to raise concerns. Any concerns must be dealt with promptly, with documented action taken when appropriate. Apprentices must be made aware of the GPhC's guide to raising concerns about pharmacy education and training, which can be found here:

www.pharmacyregulation.org/raising-concerns-about-pharmacy-education-and-training

To ensure the quality and authenticity of apprentices' work, as well as the accuracy and consistency of assessment decisions between assessors operating at the centre, centres must have robust internal verification systems and procedures in place. For information on the requirements for implementing assessment processes in a centre, please refer to the *Centre Guide to Quality Assurance – Pearson NVQs/SVQs and Competence-based qualifications*.

Additionally, centres offering the qualification as stand-alone should refer to the document *Delivery Guidance and Quality Assurance Requirements – NVQs/SVQs and Competence-based qualifications*.

There must be a quality management structure in place to monitor all aspects of the programme, including planning, assessment and feedback, which must be monitored, reviewed and evaluated on a systematic basis and established at the beginning of the programme. This sampling strategy may expand as risk and practice develops. When issues are identified, they must be documented and addressed within agreed timescales that ensure that neither apprentice progress nor accurate assessment decisions are hindered. Staff responsible for the oversight and implementation of quality management systems should be identified and be responsible for timely reporting and analysis of the outcomes.

Monitoring systems must be in place in all learning and training environments. The systems must assess an apprentice's progress towards meeting the learning outcomes in part 1 of the IET standards. They must ensure that, as a pre-registration trainee Pharmacy Technician, an apprentice's practice is safe at all times. Causes for concern must be dealt with as soon as possible.

Programme monitoring and review must take into account the external environment, especially pharmacy, to make sure that programmes stay up to date as they are delivered. Programmes must be revised when there are significant changes in practice to make sure they are up to date. For example, any changes to legislation relating to pharmacy should be promptly identified and the most up-to-date legislation referenced in the programme.

Specific resource requirements

As well as the general requirements above, which include access to a pharmacy and to a registered pharmacy professional to act as a supervisor or mentor, there are specific resource requirements that centres must meet. They are listed by unit below.

Unit	Resources required
7	Apprentices will need to be able to undertake a patient-facing role in the pharmacy. Standard Operating Procedures should be in place for all tasks required in this unit and all health and safety requirements must be in place.
8	Standard Operating Procedures should be in place for all tasks required in this unit and all health and safety requirements must be in place.
9	Standard Operating Procedures should be in place for all tasks required in this unit and all health and safety requirements must be in place.
10	Ideally, apprentices should have access to a laboratory equipped with standard laboratory equipment and reactants enabling apprentices to carry out a range of experiments investigating aspects of the unit content. Where this is not possible, the use of technology to allow apprentices to experience laboratory experiments, for example through videos or Skype®, or ready-prepared packs of experiments sent to the apprentice's workplace are acceptable alternatives.
15	Ideally, apprentices should have access to a laboratory equipped with the materials to carry out microbiological experiments, such as autoclaves, incubation equipment, growth media and associated glassware/equipment. Where this is not possible, the use of technology to allow apprentices to experience laboratory experiments, for example through videos or Skype®, or ready-prepared packs of experiments sent to the apprentice's workplace are acceptable alternatives.
21	Apprentices will require access to Standard Operating Procedures.

Suggested textbooks are listed at the end of each unit. The language used in pharmacy textbooks is often too high level for Level 3, so it is likely that this material will need to be adapted for teaching pre-registration trainee Pharmacy Technicians. Some of the suggested resources are published by the Royal Pharmaceutical Society, which is a membership organisation for pharmacists only. Membership of the Royal Pharmaceutical Society may be required in order to access these resources.

Where legislation is taught, centres must ensure that it is current and up to date.

8 Access and recruitment

Our policy on access to our qualifications is that:

- they should be available to everyone who is capable of reaching the required standards

- they should be free from barriers that restrict access and progression

- there should be equal opportunities for all wishing to access the qualifications.

Centres must ensure that their apprentice recruitment process is conducted with integrity. This includes ensuring that applicants have appropriate information and advice about the apprenticeship to ensure that it will meet their needs.

Selectors must apply the selection criteria consistently, in an unbiased way and in line with relevant legislation. They should be trained to do this and training should include equality, diversity and inclusion.

Prior knowledge, skills and understanding

In order to register for this apprenticeship, apprentices must be working in a pharmacy environment, having secured a placement as a pre-registration trainee Pharmacy Technician, and have GCSE pass grades (C or above) or equivalent qualifications in English, mathematics and science, an acceptable reference for good character and an acceptable self-declaration for health. In addition to the requirements above, other appropriate evidence would include:

- (S)NVQ at Level 2 or above, preferably related to pharmacy

- National 5 (N5) qualifications, which are the Scottish equivalent of the GCSE (the N5 is the more academically advanced of the qualifications, with candidates being awarded the qualification at grades A, B, C and D. Scottish National 5 certificates grade A to C are broadly equivalent to GCSE grades 4 to 9)

- other appropriate academic requirements and/or experience. Centres can use the UK National Academic Recognition Information Centre (UK NARIC) to compare a UK qualification with any non-UK qualification.

Acceptable references for good character could include references from the apprentice's school or employer and the Disclosure and Barring Service/Disclosure Scotland checks or equivalent.

An acceptable self-declaration for health must provide information on conditions that may affect an applicant's fitness to practise as a trainee and how such conditions could be managed.

Template good character reference and self-declaration for health forms are given in *Annexe B* and *Annexe C* respectively.

Formal agreements between the employer and centre should set out clearly who is responsible for good character checks and assessing whether the apprentice has the right attributes to train as a healthcare professional. These checks must be completed before commencement of the course.

Centres will need to demonstrate how concerns about good character or health are dealt with during the selection process.

Access to qualifications for apprentices with disabilities or specific needs

Equality and fairness are central to our work. Pearson's *Equality, diversity and inclusion policy* requires all apprentices to have equal opportunity to access our qualifications and that our qualifications are awarded in a way that is fair to every apprentice.

We are committed to making sure that:

- apprentices with a protected characteristic (as defined by the Equality Act 2010) are not, when they are undertaking one of our qualifications, disadvantaged in comparison to apprentices who do not share that characteristic

- all apprentices achieve the recognition they deserve from undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers.

For apprentices with disabilities and specific needs, the assessment of their potential to achieve the apprenticeship must identify, where appropriate, the support that will be made available to them during delivery and assessment of the apprenticeship. Please see the information regarding reasonable adjustments and special consideration in *Section 9: Assessment*.

9 Assessment

To achieve the apprenticeship, the apprentice must achieve all the units required in the qualification structure.

Assessment Principles

The Assessment Principles for the on-programme units of learning (*units 1-21*) are included in *Annexe A*. This document sets out the overarching assessment requirements and the framework for assessing the units to ensure that the apprenticeship remains valid and reliable. It has been developed by the Sector Skills Council, Skills for Health.

Language of assessment

Assessments for the units in this qualification are in English only.

An apprentice taking the apprenticeship may be assessed in British Sign Language where it is permitted for the purpose of reasonable adjustment.

Further information on the use of language in apprenticeships is available in our document *Use of languages in qualifications policy,* available on our website.

Further information on access arrangements can be found in the Joint Council for Qualifications (JCQ) document *Access arrangements and reasonable adjustments*.

Reassessment

On-programme Units:

Guidance on retakes is given in *Annexe A: Assessment Principles for the Level 3 Diploma in the Principles and Practice for Pharmacy Technicians*. For detailed guidance on giving feedback to apprentices in this context, centres should refer to the *BTEC Centre Guide to Internal Assessment*.

End-point Assessment (EPA) Units:

Apprentices who fail one or more of the mandatory EPA units will be offered the opportunity to take a resit or a retake the unit(s).

Apprentices should have a supportive action plan to prepare for the resit or a retake. The apprentice's employer will need to agree that a re-sit or re-take is an appropriate course of action.

Any assessment method resit or retake must be taken during the maximum EPA period, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Resits and retakes are not offered to apprentices wishing to move from Pass to Distinction.

Where any assessment method has to be resat or retaken, the apprentice will be awarded a maximum EPA grade of Pass unless the EPAO determines there are exceptional circumstances requiring a resit or retake.

The Pearson end-point assessment retest and reassessment policy will apply, subject to discussion with the employer/training provider.

Internal on-programme assessment

The on-programme units 1-21 are assessed through an internally assessed and externally quality assured portfolio of evidence, made up of evidence gathered during the course of the apprentice's work.

Each unit has specified learning outcomes and assessment criteria. To pass each unit the apprentice must:

- achieve **all** the specified learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each criterion
- prove that the evidence is their own.

Apprentices must have an assessment record that identifies the assessment criteria that have been met. The assessment record should be cross-referenced to the evidence provided. The assessment record should include details of the type of evidence and the date of assessment. Suitable centre documentation should be used to form an assessment record.

Suggested activities are included in each unit. In addition to the suggested activities, assessors must take opportunities to carry out professional discussions and mock holistic observations with Q&A based on the assessment plan to prepare learners for the End-point Assessment.

External end-point assessment

Unit 22: Observation End-point Assessment for Pharmacy Technician Apprentices and *Unit 23: Professional Discussion End-point Assessment for Pharmacy Technician Apprentices* are externally assessed as the apprentice's EPA. These units are graded and this is further explained in *Section 5: Grading* and *Section 9: The End-point Assessment.*

The end-point assessment for the Pharmacy Technician Apprenticeship consists of the following two assessment components:

- Professional discussion (based on a portfolio of evidence)
- Observation (with question and answer session).

The table below gives a summary of the structure of the end-point assessment.

End-point assessment components	Duration	Weighting %	Component grading
Professional discussion (based on a portfolio of evidence)	90 mins (+/-10mins)	50%	Fail/Pass/Distinction
Observation (with question and answer session)	60 mins + 20 min Q&A (+/-10mins)	50%	Fail/Pass

There is further detailed information about each of these end-point assessment components in the *End-point Assessment Resources Pack (EPARP)* available from Pearson.

Appeals

Centres must have a policy for dealing with appeals from apprentices. Appeals may relate to incorrect assessment decisions or unfairly conducted assessment. The first step in such a policy is a consideration of the evidence by a Lead Internal Verifier or other member of the programme team. The assessment plan should allow time for potential appeals after apprentices have been given assessment decisions.

Centres must document all apprentices' appeals and their resolutions. Further information on the appeals process can be found in our *Enquiries and appeals about Pearson vocational qualifications and end-point assessment policy* document, available on our website.

Dealing with malpractice

Malpractice means acts that undermine the integrity and validity of assessment, the certification of apprenticeships and/or may damage the authority of those responsible for delivering the assessment and certification.

Pearson does not tolerate actions (or attempted actions) of malpractice by apprentices, centre staff or centres in connection with Pearson apprenticeships. Pearson may impose penalties and/or sanctions on apprentices, centre staff or centres where incidents (or attempted incidents) of malpractice have been proven.

Malpractice may arise or be suspected in relation to any unit or type of assessment within the apprenticeship. For further details on malpractice and advice on preventing malpractice by apprentices please see our document *Centre guidance: Dealing with malpractice and maladministration in vocational qualifications,* available on our website.

Internal assessment

Centres are required to take steps to prevent malpractice and to investigate instances of suspected malpractice. Apprentices must be given information that explains what malpractice is for internal assessment and how suspected incidents will be dealt with by the centre. Our document *Centre guidance: Dealing with malpractice and maladministration in vocational qualifications* gives full information on the actions we expect you to take.

Pearson may conduct investigations if we believe that a centre is failing to conduct internal assessment according to our policies. The above document gives more information and examples and details the penalties and sanctions that may be imposed.

In the interests of apprentices and centre staff, centres need to respond effectively and openly to all requests relating to an investigation into an incident of suspected malpractice.

External assessment

For the *Pearson Level 3 End-point Assessment for Pharmacy Technician (Integrated),* End-point Assessment Organisations (EPAOs) must have internal quality assurance requirements in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPAOs for this End-point Assessment must:

- appoint independent assessors who are qualified and registered as a pharmacist or Pharmacy Technician with the General Pharmaceutical Council (GPhC)

- appoint independent assessors who have recent relevant experience of the occupation/sector as a pharmacist or Pharmacy Technician with at least one year's experience in the role

- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading

- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time

- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time

- ensure independent assessors attend standardisation events annually.

Apprentice malpractice

The head of centre is required to report incidents of suspected apprentice malpractice that occur during Pearson examinations. We ask centres to complete *JCQ Form M1* (www.jcq.org.uk/exams-office/malpractice) and email it with any accompanying documents (signed statements from the apprentice, invigilator, copies of evidence, etc) to the Investigations Team at pqsmalpractice@pearson.com. The responsibility for determining appropriate sanctions or penalties to be imposed on apprentices lies with Pearson.

Apprentices must be informed at the earliest opportunity of the specific allegation and the centre's malpractice policy, including the right of appeal. Apprentices found guilty of malpractice may be disqualified from the apprenticeship for which they have been entered with Pearson.

Teacher/centre malpractice

The head of centre is required to inform Pearson's Investigations Team of any incident of suspected malpractice by centre staff, before any investigation is undertaken. The head of centre is requested to inform the Investigations Team by submitting a *JCQ M2(a)* form (downloadable from www.jcq.org.uk/exams-office/malpractice) with supporting documentation to pqsmalpractice@pearson.com. Where Pearson receives allegations of malpractice from other sources (for example Pearson staff, anonymous informants), the Investigations Team will conduct the investigation directly or may ask the head of centre to assist.

Incidents of maladministration (accidental errors in the delivery of Pearson apprenticeships that may affect the assessment of apprentices) should also be reported to the Investigations Team using the same method.

Heads of centres/principals/chief executive officers or their nominees are required to inform apprentices and centre staff suspected of malpractice of their responsibilities and rights, please see 6.15 of the Joint Council for Qualifications (JCQ) document *Suspected malpractice in examinations and assessments – Policies and procedures*.

Pearson reserves the right in cases of suspected malpractice to withhold the issuing of results/certificates while an investigation is in progress. Depending on the outcome of the investigation, results and/or certificates may not be released or they may be withheld.

We reserve the right to withhold certification when undertaking investigations, audits and quality assurances processes. You will be notified within a reasonable period of time if this occurs.

Sanctions and appeals

Where malpractice is proven, we may impose sanctions or penalties.

Where apprentice malpractice is evidenced, penalties may be imposed such as:

- mark reduction for affected external assessments

- disqualification from the apprenticeship

- debarment from registration for Pearson apprenticeships for a period of time.

If we are concerned about your centre's quality procedures, we may impose sanctions such as:

- working with you to create an improvement action plan

- requiring staff members to receive further training

- placing temporary blocks on your certificates

- placing temporary blocks on registration of apprentices

- debarring staff members or the centre from delivering Pearson apprenticeships

- suspending or withdrawing centre approval status.

The centre will be notified if any of these apply.

Pearson has established procedures for centres that are considering appeals against penalties and sanctions arising from malpractice. Appeals against a decision made by Pearson will normally be accepted only from the head of centres (on behalf of apprentices and/or members or staff) and from individual members (in respect of a decision taken against them personally). Further information on appeals can be found in our *Enquiries and appeals about Pearson vocational qualifications and end-point assessment policy* document, available on our website, qualifications.pearson.com. In the initial stage of any aspect of malpractice, please notify the Investigations Team (via pqsmalpractice@pearson.com) who will inform you of the next steps.

Reasonable adjustments to assessment

Reasonable adjustments must be made to course delivery and assessment to help apprentices having specific needs to meet the learning outcomes. Teaching, learning and assessment may be modified for this purpose but learning outcomes may not.

Centres are able to make adjustments to assessments to take account of the needs of individual apprentices in line with the guidance given in the document *Guidance for reasonable adjustments and special consideration in vocational internally assessed units*. In most instances, adjustments can be achieved by following the guidance; for example, allowing the use of assistive technology or adjusting the format of the evidence. We can advise you if you are uncertain as to whether an adjustment is fair and reasonable. Any reasonable adjustment must reflect the normal learning or working practice of an apprentice in a centre or working within the occupational area.

Further information on access arrangements can be found in the Joint Council for Qualifications (JCQ) document *Access arrangements and reasonable adjustments*.

Special consideration

Centres must operate special consideration in line with the guidance given in the document *Guidance for reasonable adjustments and special consideration in vocational internally assessed units*. Special consideration may not be applicable in instances where:

- assessment requires the demonstration of practical competence
- criteria have to be met fully
- units/apprenticeships confer licence to practice.

Centres cannot apply their own special consideration; applications for special consideration must be made to Pearson and can be made only on a case-by-case basis. A separate application must be made for each apprentice and certification claims must not be made until the outcome of the application has been received.

Further information on special consideration can be found in the Joint Council for Qualifications (JCQ) document *A guide to the special consideration process*.

10 The End–point Assessment

Introduction

This integrated qualification includes the apprenticeship End-point Assessment and this section includes the requirements for that part of the qualification. Delivery information for the EPA units is included in EPA *units 22* and *23*.

Grading

The on-programme units of learning are graded as Pass/Fail only but the apprentice will achieve a Fail/Pass/Distinction grade on their overall certificate that is determined by their performance in the End-point Assessment (EPA) Professional Discussion unit. If any of the on-programme units are failed, then the apprentice will not pass through gateway. If either EPA unit is failed, then the apprentice will achieve a Fail as their overall apprenticeship grade.

For further details on grading see *Section 5 Grading.*

Gateway requirements

Before progressing to the end-point assessment, all apprentices must be signed off by their employer, through the 'gateway'. This gateway sign off confirms that apprentices have the level of occupational knowledge, skills and behaviours required to achieve the apprenticeship and that they are therefore 'ready for end-point assessment'. Employers should only recommend apprentices for point assessment when they are confident that apprentices are ready.

The end-point assessment period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

In addition to the employer's confirmation that the apprentice is working at or above the level in the occupational standard, the apprentice must have completed the following gateway requirements prior to beginning EPA:

- apprentices without level 2 English and mathematics must achieve this level prior to taking the End-point Assessment

- for those with an education, health and care plan or a legacy statement the apprenticeship's English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language

- completed all of the practical units and assessments on the programme to meet both the knowledge, skills and behaviours of the occupational standard, and the requirements of the regulator (GPhC)

- the apprentice has completed and submits their portfolio to the EPAO at the Gateway (please see *Unit 22: Professional Discussion End-point Assessment for Pharmacy Technician Apprentices* for more information on the types and format of evidence required in the portfolio of evidence).

Centres will also be visited by a Pearson Standards Verifier (SV) to ensure the above requirements are in place before the apprentice can go through Gateway.

Employers must complete an end-point assessment *Gateway Declaration Form* (see *Annexe H*), with the apprentice. The form and the associated gateway evidence will be transferred to Pearson before the end-point assessments take place. The form captures the mandatory prerequisites for the end-point assessments and any other organisation-specific evidence. The assessments cannot take place unless the relevant information and evidence is available.

Evidence that the apprentices have met the gateway requirements must be provided to support the *Gateway Declaration Form*

End-point assessment planning and scheduling

Employers and/or training providers must have an agreement in place to conduct EPAs with Pearson, and apprentices must be registered on the ACE360 system. Once the gateway evidence has been uploaded to ACE360, this will alert the Independent End-point Assessor (IEA) to review the evidence and start the planning and scheduling process.

The purpose of the EPA planning meeting is to share information with the IEA in order to support the assessment process and to agree a plan for the upcoming assessment activities for the apprentices. The IEA will agree a plan and schedule for each assessment activity. The end-point assessment planning meeting can be conducted remotely using appropriate technology.

All components of the end-point assessment must be completed within the time period specified in *Section 1: Introducing the Integrated Qualification and End-point Assessment.*

11 Centre recognition and approval

Centre recognition

Centres must have approval prior to delivering or assessing any of the units in this qualification.

Centres that have not previously offered Pearson integrated qualifications need to apply for, and be granted, centre recognition and approval to offer individual qualifications.

Existing Pearson centres seeking approval to offer Pearson integrated qualifications, will be required to submit supplementary evidence for approval, aligned with the associated Standards and/or assessment requirements.

Centres offering mandatory qualifications for Apprenticeship Standards must be listed on the Education and Skills Funding Agency's Register of Training Organisations and have a contract to deliver them.

Guidance on seeking approval to deliver Pearson qualifications is available on our website.

Approvals agreement

All centres are required to enter into an approval agreement with Pearson, in which the head of centre or principal agrees to meet all the requirements of the qualification specification and to comply with the policies, procedures, codes of practice and regulations of Pearson and relevant regulatory bodies. If centres do not comply with the agreement, this could result in the suspension of certification or withdrawal of centre or qualification approval.

12 Quality assurance

For the on-programme units of learning (*units 1-21*) in this specification, the Pearson quality assurance model will consist of the following processes.

Centres will receive at least one visit from our Standards Verifier, followed by ongoing support and development. This may result in more visits or remote support, as required to complete standards verification. The exact frequency and duration of Standards Verifier visits/remote sampling will reflect the level of risk associated with a programme, taking account of the:

- number of assessment sites
- number and throughput of learners
- number and turnover of assessors
- number and turnover of internal verifiers
- amount of previous experience of delivery.

If a centre is offering the Pearson integrated qualification alongside other qualifications related to a similar Apprenticeship Standard, wherever possible we will allocate the same Standards Verifier for both qualifications.

Following registration, centres will be given further quality assurance and sampling guidance.

For further details, please see the work-based learning quality assurance handbooks, available in the support section of our website:

- *Pearson centre guide to quality assurance – NVQs/SVQs and competence-based qualifications*
- *Pearson delivery guidance & quality assurance requirements – NVQs/SVQs and competence-based qualifications.*

13 Units

Unit format

Each unit has the following sections.

Unit number

The number is in a sequence in the specification. Where a specification has more than one qualification, numbers may not be sequential for an individual qualification.

Unit title

This is the formal title of the unit that will appear on the apprentice's certificate.

Level

All units and qualifications have a level assigned to them. The level assigned is informed by the level descriptors defined by Ofqual, the qualifications regulator.

Credit value

All units in this qualification have a credit value. The minimum credit value is 1 and credits can be awarded in whole numbers only.

Guided Learning Hours (GLH)

Guided Learning Hours (GLH) is the number of hours that a centre delivering the qualification needs to provide. Guided learning means activities that directly or immediately involve tutors and assessors in teaching, supervising, and invigilating apprentices, for example lectures, tutorials, online instruction and supervised study.

Pearson has consulted with users of the qualification and has assigned a number of hours to this activity for each unit.

Unit summary

This summarises the purpose of the unit and the learning the unit offers.

Learning outcomes

The learning outcomes set out what an apprentice will know, understand or be able to do as the result of a process of learning.

Assessment criteria

The assessment criteria specify the standard the apprentice is required to meet to achieve a learning outcome. The words in bold type link to the headings in the content.

Content

This sets out the required teaching content of the unit and specifies the knowledge and understanding required for achievement of the unit. It enables centres to design and deliver a programme of learning that will enable apprentices to achieve each learning outcome and to meet the standard determined by the assessment criteria. The headings in bold type show how the content relates to the assessment criteria.

Essential information for tutors and assessors

This section gives information to support delivery and the implementation of assessment. It contains the following subsections.

- *Essential resources* – lists any specialist resources needed to deliver the unit. The centre will be asked to make sure that these resources are in place when it seeks approval from Pearson to offer the qualification.

- *Assessment* – for the knowledge units, it provides recommended assignments and suitable sources of evidence for each learning outcome. This section also gives information about the standard and quality of evidence expected for apprentices to achieve the learning outcome and pass each assignment. It is important that the information is used carefully, alongside the assessment criteria.

- *Unit assessment requirements* – this outlines the specific requirements set by the Sector Skills Council, Skills for Health, for the assessment of each individual unit. Apprentices must provide evidence according to each of the requirements stated in this section.

Unit 1:   Principles of Person–centred Approaches for Pharmacy Technicians

Level: 3

Credit value: 5

Guided Learning Hours: 30

Unit summary

The aim of this unit is to enable apprentices to develop knowledge and understanding of person-centred approaches, including communication in pharmacy services. The unit also covers the role and responsibilities of a Pharmacy Technician in relation to safeguarding.

As a Pharmacy Technician, you will interact with colleagues, patients and multi-agency professionals, so you will need an underpinning knowledge and skillset that includes effective communication, person-centred approaches and safeguarding in pharmacy services.

You will study the main purpose of effective communication and the importance of developing techniques for interviewing and managing challenging situations, alongside the wider responsibilities that are part of the role. You will explore factors that influence the need for diverse, person-centred approaches, such as environmental, cultural, religious and physical/learning disabilities. Challenges that you may encounter will be discussed, along with appropriate responses and further signposting in order that needs are met adequately. Duty of care will be observed and you will have the opportunity to develop your safeguarding skills.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand effective communication within pharmacy services	1.1	Describe the **main purpose of communication** with individuals in pharmacy services	**Main purpose of communication**: gaining consent; involving others; involving other professionals; supporting others; enabling others; listening and understanding; give information to individuals and other professionals; advise on pharmacy-related matters; obtain information from individuals and other professionals; adapt information for individuals and other professionals
		1.2	Summarise **responsibilities** of a Pharmacy Technician in relation to communication in pharmacy services	
		1.3	Assess the importance of effective communication across organisations	
		1.4	Describe the **basic principles of motivational interviewing**	**Responsibilities**: legal; organisational; professional
		1.5	Explain **techniques for managing challenging situations**	**Basic principles of motivational interviewing**: open questions; affirmation; reflection; summary
		1.6	Describe **techniques for creating suitable environment** for open and confidential discussion with the individual or third party	**Techniques for managing challenging situations**: build rapport and empathy; change the environment; defuse the emotion; explore options available; agree next steps; inform relevant others and/or other professionals

Learning outcomes	Assessment criteria		Content
	1.7	Explain the **challenges to communication** encountered within a Pharmacy Technician role	**Techniques for creating suitable environment**: quiet area away from distractions and other people; encourage open and honest discussion; promote confidentiality; respecting privacy
	1.8	Describe the **support and services** available to enable individuals to communicate effectively	**Challenges to communication**: verbal vs non-verbal; social factors; cultural factors; religious beliefs; environment; disabilities; learning difficulties
			Support and services may include: translation services; third sector organisations; support groups; training
2 Understand person-centred approaches in pharmacy services	2.1	Describe the principles of **person-centred care**	**Person-centred care**: respecting diversity; respect for values, preferences and needs; listening to the individual; providing information and education; involvement of individual, carers and key people in decisions about their care
	2.2	Summarise **responsibilities** of a Pharmacy Technician in relation to person-centred approaches	**Responsibilities**: legal; organisational; professional
	2.3	Explain why **person-centred values** should influence all aspects of healthcare within and between a range of pharmacy services	**Person-centred values** include: confidentiality; individuality; rights; choice; privacy; independence; dignity; respect; partnership; care; compassion; courage; communication; competence

Learning outcomes		Assessment criteria		Content
3	Understand the role and responsibilities of the Pharmacy Technician in relation to safeguarding individuals	3.1	Define **safeguarding**	**Safeguarding**: refer to: Working Together to Safeguard Children 2018; current Care Act Statutory Guidance; whistleblowing
		3.2	Explain how **duty of care** contributes to the safeguarding of individuals	**Duty of care**: the duty to report any acts or omissions that could be detrimental to individuals, yourself, colleagues or your employer
		3.3	Explain how to **recognise safeguarding concerns**	**Recognise safeguarding concerns**: signs and symptoms; behaviours
		3.4	Explain the process for disclosing or referring concerns about safeguarding	**Role and responsibilities**: trained to an appropriate level; familiar with local and national policies and procedures; aware of who to contact in the health service, social services or the police in the event of a safeguarding concern; familiar with the GPhC Standards for Pharmacy Professionals
		3.5	Explain the **role and responsibilities** of the Pharmacy Technician in relation to safeguarding individuals	

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this apprenticeship will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources, for example *Safeguarding Adults and the Law*.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson apprenticeship assessment strategy.

Pharmacy services may include:

- hospital settings

- community

- GP practices

- prisons.

An **individual** refers to someone requiring care or support; it will usually mean the person or people supported by the apprentice.

Learning outcome 1: Understand effective communication within pharmacy services

An example of a suitable assignment to cover this learning outcome could be an induction workbook for new Pharmacy Technicians to complete, outlining the importance of effective communication in pharmacy services. The booklet would need to focus on the communication skills required for the Pharmacy Technician role, and should include: the purpose of effective communication with individuals, colleagues and organisations; responsibilities to create a suitable, confidential environment; the basics for motivational interviews; and examples of challenging communication situations – outlining techniques to suitably manage and signpost the issues faced.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the main purpose of communication with individuals in pharmacy services, using their own words and including all relevant aspects (AC1.1)

2   briefly set out **one** legal, **one** organisational and **one** professional responsibility of a Pharmacy Technician in relation to communication in pharmacy services (AC1.2)

3   assess using detailed examples the likely impacts of effective communication across organisations, drawing a conclusion as to how important effective communication is for individuals, employees of the organisations and the organisations themselves (AC1.3)

4   give a clear account of the basic principles of motivational interviewing, using the apprentice's own words and showing understanding of how these principles can be applied in the role of Pharmacy Technician (AC1.4)

5   provide details of **at least four** techniques for managing challenging situations, giving examples to support the points made (AC1.5)

6   give a clear account of techniques for creating a suitable environment for open and confidential discussion with the individual or third party, using their own words and showing understanding of how these techniques can be applied in the role of Pharmacy Technician (AC1.6)

7   provide details of **four separate** challenges to communication encountered within a Pharmacy Technician role, giving examples to support the points made (AC1.7)

8   give a clear account, using their own words, of the support and services available to enable individuals to communicate effectively (AC1.8).

Learning outcome 2: Understand person-centred approaches in pharmacy services

An example of a suitable assignment to cover this learning outcome could be an information leaflet outlining the person-centred approaches that will be expected of a Pharmacy Technician in their role. The leaflet would need to focus on the overarching meaning and relevance of person-centred approaches in pharmacy services, and should include: rationalising the principles (i.e. respecting diversity, respect for values, preferences and needs etc.); legal, organisational and professional responsibilities; and why person-centred values (including confidentiality, individuality, rights, choice, privacy, independence and dignity) should influence all aspects of healthcare and pharmacy services.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of the principles of person-centred care, using their own words and including all relevant aspects (AC2.1)

2 briefly set out **one** legal, **one** organisational and **one** professional responsibility of a Pharmacy Technician in relation to person-centred approaches (AC2.2)

3 give **four** reasons why person-centred values should influence all aspects of healthcare within and between a range of pharmacy services, using evidence and examples to support the points made (AC2.3).

Learning outcome 3: Understand the role and responsibilities of the Pharmacy Technician in relation to safeguarding individuals

An example of a suitable assignment to cover this learning outcome could be a short question and answer paper, assessing the apprentice's understanding of the responsibilities of their role in relation to safeguarding individuals. The question and answer paper should be written to generate a recognised definition of safeguarding and should assess the following four main areas:

- *safeguarding* – refer to: *Working Together to Safeguard Children 2018*; current Care Act Statutory Guidance; whistleblowing

- *Duty of Care* – the duty to report any acts or omissions that could be detrimental to individuals, yourself, colleagues or your employer

- *recognise safeguarding concerns* – signs and symptoms; behaviours

- *role and responsibilities* – trained to an appropriate level; familiar with local and national policies and procedures; aware of who to contact in the health service, social services or the police in the event of a safeguarding concern; familiar with the GPhC Standards for Pharmacy Professionals.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   specify exactly the meaning of safeguarding, using correct terminology and referring to *Working Together to Safeguard Children 2018*, the current Care Act Statutory Guidance and whistleblowing (AC3.1)

2   provide details of how duty of care contributes to the safeguarding of individuals, giving reasons and examples to support the points made (AC3.2)

3   provide details of how to recognise safeguarding concerns, referring to signs, symptoms and behaviours, and giving reasons and examples to support the points made (AC3.3)

4   provide details of the process for disclosing or referring concerns about safeguarding, giving reasons and examples to support the points made (AC3.4)

5   provide details of the role and responsibilities of the Pharmacy Technician in relation to safeguarding individuals, giving reasons and examples to support the points made (AC3.5).

Textbooks

Boarder M, Dixon J (et al) – *Pharmacology for Pharmacy and the Health Sciences: A Patient-centred Approach,* 2nd edition (Oxford University Press, 2016) ISBN 9780198728832

Mandelstam M – *Safeguarding Adults and the Law: An A-Z of Law and Practice*, 3rd edition (Jessica Kingsley Publishers, 2019) ISBN 9781785922251

Thistlethwaite J, Mckimm J – *Health Care Professionalism at a Glance* (Wiley-Blackwell, 2015) ISBN 9781118756386

Journals

Pharmaceutical Journal – www.pharmaceutical-journal.com/learning/learning-article/how-pharmacy-can-provide-patient-centred-care-for-dementia-patients/20203385.article

Websites

www.health.org.uk/publications/person-centred-care-made-simple	Health.org PCC made simple
www.nice.org.uk/guidance/ng5/resources/implementation-case-scenarios-487189693	National Institute for Health and Care Excellence (NICE) case studies

Unit 2: Principles of Health and Safety for Pharmacy Technicians

Level: 3

Credit value: 2

Guided Learning Hours: 10

Unit summary

The aim of this unit is to give apprentices an in-depth understanding of health and safety requirements in relation to the Pharmacy Technician role. The learning from this unit should be used to underpin other learning for Pharmacy Technicians and skills will be assessed through other units within this qualification.

Apprentices should be made aware that emergency first aid and first aid at work are not assessed through this unit. A stand-alone qualification should be undertaken if this is a required element of the apprentice's role.

In this unit, you will explore the responsibilities of the Pharmacy Technician relating to health and safety legislation, standards and procedures in the workplace. You will study health and safety risk management, and procedures for responding to accidents and emergencies in the workplace.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the responsibilities relating to health and safety in the workplace	1.1	Outline the **legislation** relating to health and safety in pharmacy services	**Legislation**: Health and Safety at Work Act 1974; manual handling; disposal of pharmaceutical waste; Control of Substances Hazardous to Health (COSHH); workplace injury; workplace ill health; Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR); safe working environment; safeguarding; Deprivation of Liberty. Provision for first aid at work
		1.2	Evaluate the **standards and procedures** relating to health and safety in pharmacy services	
		1.3	Analyse the main health and safety responsibilities for: • Pharmacy Technician • employer • **others** in the workplace	**Standards and procedures**: **Standards**: GPhC Professional Standards **Procedures** should reference the Standard Operating Procedures relevant to own role. Procedures should also cover how to access information and support relating to health and safety; incident reporting; disposal of pharmaceutical waste
		1.4	Reflect on own compliance with health and safety procedures	**Others** could include: individuals; customers; colleagues; visitors

Learning outcomes		Assessment criteria		Content
2	Understand health and safety risk management	2.1	Summarise the **principles of risk management**	**Principles of risk management**: Health and Safety Executive principles of risk management http://www.hse.gov.uk/risk/principles.htm
		2.2	Summarise the **components of a risk management system**	**Components of a risk management system**: risk assessment; risk avoidance; risk transfer, mitigation or prevention; risk retention
		2.3	Explain the use of health and safety risk assessments in relation to **workplace practices**	**Workplace practices** may include: quality; stock management; dispensing; disposal of pharmaceutical waste; handling hazardous substances; public areas; working with individuals; work tasks; workstations
3	Understand procedures for responding to accidents and emergencies	3.1	Describe the procedures for dealing with **accidents and emergencies** in own workplace	**Accidents and emergencies** should cover spillages of pharmaceutical products/waste, medical conditions/emergencies, sudden illness; slips, trips, falls; minor injury etc.
		3.2	Analyse the responsibilities of a Pharmacy Technician in responding to accidents and emergencies	

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources, for example the Health and Safety Executive (HSE) website.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

For AC3.2 apprentices **must** comment on requirements for first aid training.

Learning outcome 1: Understand the responsibilities relating to health and safety in the workplace

An example of a suitable assignment to cover this learning outcome could be a slide presentation with accompanying notes, to be made available to all staff as a learning resource. The presentation will need to focus on health and safety *legislation* in the workplace, including the Health and Safety at Work etc. Act 1974, manual handling and disposal of pharmaceutical waste. The presentation will need to cover *standards* (such as the GPhC Professional Standards) and *procedures* (referencing the Standard Operating Procedures relevant to the apprentice's own role). It should also cover how to access information and support relating to health and safety. Acknowledgement of the apprentice's own compliance with health and safety procedures should be included. The slide presentation will not need to be delivered but should last for a maximum of 10 minutes.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear description setting out the main points of the legislation relating to health and safety in pharmacy services (AC1.1)

2   review the standards and procedures relating to health and safety in pharmacy services and form a conclusion as to their effectiveness, drawing on evidence including strengths, weaknesses, alternative actions, relevant data or information (AC1.2)

3   examine methodically and in detail the main health and safety responsibilities for a Pharmacy Technician, an employer, and others in the workplace (AC1.3)

4   reflect, using reasons and examples, on own compliance with health and safety procedures, and suggesting ways to improve own compliance in future (AC1.4).

Learning outcome 2: Understand health and safety risk management

An example of a suitable assignment to cover this learning outcome could be a short question and answer paper. The paper would need to focus on generating correct responses to questions about the principles of risk management, the components of a risk management system (such as risk assessment and risk avoidance) and how risk assessments relate to workplace practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   briefly set out the Health and Safety Executive's principles of risk management (AC2.1)

2   briefly set out the components of a risk management system (AC2.2)

3   provide details of the use of health and safety risk assessments in relation to **six** workplace practices, giving reasons and examples to support the points made (AC2.3).

Learning outcome 3: Understand procedures for responding to accidents and emergencies

An example of a suitable assignment to cover this learning outcome could be an information poster to be displayed in the pharmacy staff area. The poster would need to be clear and concise in terms of graphics and instruction and show how to deal with accidents and emergencies in the workplace. This would need to include responses to the following: spillages of pharmaceutical products/waste; medical conditions/emergencies; sudden illness; slips, trips, falls; and minor injury.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account, using the apprentice's own words, of the procedures for dealing with **four** different types of accident and emergency in own workplace (AC3.1)

2   examine methodically and in detail the responsibilities of a Pharmacy Technician in responding to accidents and emergencies. Reference must be made to requirements for first aid training (AC3.2).

Textbooks

Boyle T – *Health and Safety: Risk Management*, 5th edition (Routledge, 2018)
ISBN 9781138349216

Thistlethwaite J, Mckimm J – *Health Care Professionalism at a Glance*
(Wiley-Blackwell, 2015) ISBN 9781118756386

Journal

Pharmaceutical Journal – www.pharmaceutical-journal.com/learning/

Websites

www.hse.gov.uk/	Health and Safety Executive
www.hse.gov.uk/pubns/books/lawposter-a2.htm	Health and safety law poster – a summary of legal requirements for display on business premises

Unit 3:   Personal Development for Pharmacy Technicians

Level: 3

Credit value: 5

Guided Learning Hours: 25

Unit summary

The aim of this unit is to ensure that the Pharmacy Technician has a full understanding of the expectations of the role and that they are able to reflect on their own practice and performance, including identifying opportunities for development. The unit also covers developing a personal development plan.

In this unit, you will explore a range of skills and gain underpinning knowledge in personal development, essential to working in a pharmacy. You will learn how and why statutory regulation affects pharmacy practice and how your own role as a Pharmacy Technician is governed by legislation and standards developed to protect the public.

As professionalism is a key aspect of your role as a Pharmacy Technician, this will be broadly explored, including the importance of professional standards, working within your own scope of practice and the purpose of revalidation. You will investigate, in depth, a variety of authentic ethical dilemmas that are likely to arise in the course of your duties. A common denominator among professional disciplines is the ability to reflect on our own practice. You will explore the links between reflection and the quality improvement aspect of your role, while evaluating a number of models of reflective practice. This unit gives you the opportunity to demonstrate skills in evaluating your own performance and in recognising poor performance (both your own and that of others). You will discuss the actions required to remedy poor performance and how relevant policies will support you in your role. You will be supported to review and address your own continuing professional development needs by producing a personal development plan, while contributing to the personal development of others.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes	Assessment criteria		Content
1 Understand how the role of the Pharmacy Technician is governed	1.1	Explain the impact of **statutory regulation** in pharmacy services	**Statutory regulation**: premises; individual pharmacy professionals; data protection; confidentiality; duty of candour
	1.2	Discuss how **legislation and standards** govern the role of the Pharmacy Technician	**Legislation**: The Medicines Act 1968, Human Medicines Regulations 2012: Falsified Medicines Legislation; Medicines and Healthcare products Regulatory Agency (MHRA); European Medicines Agency (EMA); licensed status (unlicensed medicines, licensed medicines, such as ML, MIA, specials, Section 10/Part 10 exemption requirements; environmental and waste regulations
			Standards: organisational policies and procedures; classification, labelling and packaging of substances and mixtures; safe and secure handling of medicines

Learning outcomes		Assessment criteria		Content
2	Understand professionalism within the role of a Pharmacy Technician	2.1	Explain the importance of the **professional standards** for Pharmacy Technicians	**Professional standards**: General Pharmaceutical Council Standards for Pharmacy Professionals
		2.2	Explain the importance of working within own scope of practice	**Ethical dilemmas** may include: breaches of confidentiality; problems with professional appearance; whistle blowing; problems with unprofessional behaviour; limits of competence; protecting dignity; providing false information
		2.3	Explain **ethical dilemmas** that may present to a Pharmacy Technician within own scope of practice	**Revalidation**: General Pharmaceutical Council Revalidation Framework
		2.4	Explain the purpose of **revalidation** for Pharmacy Technicians	
3	Understand how to reflect on own practice	3.1	Assess the importance of **elements of reflective practice** in continuously improving the quality of service provided	**Elements of reflective practice**: focus on person-centred care; time management; decision making; professional judgement; team working; communication
		3.2	Explain different **models of reflection**	**Models of reflection** may include: Borton (1970); Kolb and Fry (1975); Argyris and Schon (1978); Gibbs (1988); Johns (1995); Brookfield (1998)
4	Be able to evaluate own performance	4.1	Apply a model of reflection to evaluate own performance	**Feedback** could be from: colleagues; line manager; service users
		4.2	Use **feedback** to evaluate own performance	

Learning outcomes		Assessment criteria		Content
5	Be able to recognise behaviour that does not meet the required professional standard	5.1	Recognise own **poor performance** and **respond appropriately**	**Poor performance** may include: putting individuals at risk; working outside of own scope of competence; unprofessional behaviour; providing incorrect advice; not meeting the required standard of a pharmacy professional
		5.2	Recognise **poor performance** of others and take **appropriate action**	
		5.3	Explain the whistleblowing procedure in line with regulatory guidelines	**Respondivng appropriately** should include: admitting fault; acting open and honestly when things go wrong; raising concerns with the appropriate person/agency even when not easy to do so; whistleblowing
				Appropriate action should include: raising concerns with the appropriate person/agency; addressing poor performance with the individual involved; whistleblowing

Learning outcomes		Assessment criteria		Content
6	Be able to develop a personal development plan	6.1	Assess the importance of **continuing professional development** for Pharmacy Technicians	**Continuing professional development (CPD)** refers to the process of tracking and documenting the skills, knowledge and experience gained both formally and informally in the workplace, beyond any initial training. It is a record of what is experienced, learned and then applied **Development needs** should include: learning needs; interests; development opportunities A **personal development plan** may have a different name but will record information including agreed objectives for development, proposed activities to meet objectives, timescales for review, etc.
		6.2	Review and prioritise **own development needs**	
		6.3	Work with others to develop a **personal development plan**	
7	Be able to contribute to the development of others	7.1	Identify learning needs of **others**	**Others** may include: team members; other colleagues **Contribution** may include: demonstration of leadership skills; applying professional practice; providing constructive feedback; empowering others; providing opportunities; encouraging others to learn from mistakes; coaching or mentoring
		7.2	Support individuals with developing their own personal development	
		7.3	Review own **contribution** to the development of others	

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and they should be registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

This unit is expected to be assessed in the real working environment where the evidence is naturally occurring and is collected over a period of time. Further details are given later in this section.

Centres are responsible for deciding on the assessment activities that will enable apprentices to produce valid, sufficient, authentic and appropriate evidence to meet the assessment criteria. When planning delivery and assessment for this unit, centres may consider alignment with the Apprenticeship Standard.

Apprentices must be given a clear assessment brief before the assessment takes place, detailing:

- the assessment activity and context

- the learning outcome(s) to be assessed

- the criteria they are expected to meet

- the time and duration of the assessment.

Wherever possible, centres should adopt a holistic and integrated approach to assessing the skills-based units in the qualification. This gives the assessment process greater rigour, minimises repetition and saves time. The focus should be on assessment activities generated through naturally occurring evidence in the workplace, rather than on specific tasks. Taken as a whole, the evidence must show that the apprentice meets all learning outcomes and assessment criteria over a period of time. It should be clear in the assessment records where each learning outcome and assessment criterion has been covered and achieved.

Please refer to the guidance on selecting suitable assessment activities for the skills-based units, available on our website.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy. Evidence of personal development and reflection should be collected across the duration of the qualification. Personal development plans should be developed as part of the overall appraisal process. For learning outcome 5, simulation may be permitted if the apprentice is unable to generate evidence through normal work activity.

There is an expectation that reflection and personal development is ongoing during the whole learning programme. It should include evidence that a personal development plan is in place and reviewed as part of different placements. Reflection should include a variety of methods including feedback from colleagues.

Learning outcome 1: Understand how the role of the Pharmacy Technician is governed

Learning outcome 1 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be a poster to be displayed in a work area as a reference for staff on how pharmacy services are governed. The poster would need to cover the following three areas: statutory regulation; legislation; standards.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the impact of statutory regulation on pharmacy services, giving reasons and examples to support the points made (AC1.1)

2   give a clear account of how legislation and standards govern the role of the Pharmacy Technician, using their own words and referring to **four** pieces of legislation and **two** standards (AC1.2).

Learning outcome 2: Understand professionalism within the role of a Pharmacy Technician

Learning outcome 2 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be an introductory booklet for new Pharmacy Technicians, explaining the professional standards that will be expected of them in their role. The booklet would need to include details of the General Pharmaceutical Council Standards for Pharmacy Professionals, how to work within the scope of own role, possible ethical dilemmas in the role, and the General Pharmaceutical Council Revalidation Framework.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the importance of the professional standards for Pharmacy Technicians, giving reasons to support the points made (AC2.1)

2   provide details of the importance of working within own scope of practice, giving reasons to support the points made (AC2.2)

3   provide details of **three** authentic examples of ethical dilemmas that can present to a Pharmacy Technician, offering examples of appropriate responses within own scope of practice, and giving reasons to support the points made. Reference should be made to appropriate courses of action in situations that are outside own scope of practice (AC2.3)

4   provide details of the purpose of revalidation for Pharmacy Technicians, giving reasons to support the points made (AC2.4).

Learning outcome 3: Understand how to reflect on own practice

Learning outcome 3 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be a personal reflective log, which the apprentice would be able to share with new staff to help other Pharmacy Technicians reflect on their own practice. As the aim of this would be to improve the service they provide, the journal would need to set out elements of reflective practice, considering how each can help improve service. The journal would also need to include details of models of reflective practice, giving examples of how each can be used in the role of Pharmacy Technician, supported by authentic examples. Apprentices should not include any identifiable patient information.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   assess in detail **three** elements of reflective practice relevant to continuously improving the quality of the Pharmacy Technician service provided, giving examples from practice to support the elements chosen (AC3.1)

2   provide details of **three** models of reflection, identifying any significant differences between the models and giving examples from practice to support their explanation of how each model works (AC3.2).

Learning outcomes 4, 5, 6 and 7 assess skills. The primary method of assessment for these learning outcomes is observation in the workplace by the assessor.

Across the qualification's skills-based units there must be at least three observations, which cover the required skills. Evidence should be generated over a period of time to show consistent performance. Expert witness testimony may be used where it is difficult for an assessor to observe aspects of practice. Expert witness testimony is NOT a substitute for the requirement of the three observations by the assessor across the qualification.

Textbooks

Cottrell S – *Skills for Success: Personal Development and Employability*, 3rd edition (Palgrave Macmillan, 2015) ISBN 9781137426529

Johns C – *Becoming a Reflective Practitioner*, 5th edition (Wiley-Blackwell, 2017) ISBN 9781119193920

Royal Pharmaceutical Society – *Medicines, Ethics and Practice* (Pharmaceutical Press, current, published annually in July)

Thistlethwaite J, Mckimm J – *Health Care Professionalism at a Glance* (Wiley-Blackwell, 2015) ISBN 9781118756386

Websites

www.aptuk.org	Association of Pharmacy Technicians UK
www. businessballs.com	Leadership, management and personal effectiveness training
www.cppe.ac.uk	Centre for Pharmacy Postgraduate Education
www.npa.co.uk	National Pharmacy Association
www.pharmj.com	*Pharmaceutical Journal* online
www.rpharms.com	Royal Pharmaceutical Society

Unit 4: Principles of Health Promotion and Wellbeing in Pharmacy Services

Level:	3
Credit value:	5
Guided Learning Hours:	35

Unit summary

The aim of this unit is to enable apprentices to develop knowledge and understanding of the factors that influence individuals' health and wellbeing, the concept of public health in relation to pharmacy services, the role of the Pharmacy Technician in the promotion of public health and how theories of behaviour change can be applied to health promotion.

In this unit, you will learn about the relationship between lifestyle, health and wellbeing – factors that impact on every individual, on communities, and on society as a whole. You will explore the relationship between health promotion and pharmacy services in terms of functions and interventions. Focusing on the Pharmacy Technician role, you will see how influential and informative you can be in relation to health promotion activities in communities, linking it to health behaviours, barriers and challenges.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand factors that influence health and wellbeing	1.1	Explain the relationship between **lifestyle** and health and well-being	**Lifestyle**: diet; exercise; smoking; substance use; recreation; risky behaviour
		1.2	Analyse **factors** which impact on health and well-being	**Factors**: individual and wider determinants; biological; chemical; physical; social; psychosocial
		1.3	Explain the **impact** of health and well-being on society	**Impact**: management of disease; services and resources; economics; dependency; inequalities

Learning outcomes		Assessment criteria		Content
2	Understand relationship between public health and pharmacy services	2.1	Explain the **functions** of public health organisations	**Functions**: health protection; health improvement; health promotion
		2.2	Explain the role of health promotion in relation to public health	**Interventions**: four service domains – optimising the use of medicines, supporting people to self-care, supporting people to live healthier lives, supporting people to live independently; making every contact count (MECC); multidisciplinary team working, partnership and co-production; public health interventions: antibiotic resistance, alcohol, cancer, cardiac health, diabetes, flu, healthy eating and obesity, deprivation and poverty; mental health and well-being, oral health, physical activity, respiratory management, self-care, sexual health, smoking, substance misuse, etc.
		2.3	Explain the role of pharmacy services in supporting public health	
		2.4	Explain the role of pharmacy services in current health promotion policies, campaigns and **interventions**	

Learning outcomes		Assessment criteria		Content
3	Understand how principles of behaviour change can be applied to health promotion	3.1	Describe **principles** of effective behaviour change	**Principles**: goals and planning; feedback and monitoring; social support **Factors**: individual; social; environmental **Barriers**: individual; social; environmental **Health promotion approaches**: medical; educational; empowerment; evidence-based
		3.2	Explain **factors** that influence behaviour change	
		3.3	Describe **barriers** to behaviour change	
		3.4	Explain how **health promotion approaches** can affect behaviour change	
4	Understand the role of the Pharmacy Technician in the promotion of public health	4.1	Summarise the **role of the Pharmacy Technician** in relation to health promotion activities	**Role of the Pharmacy Technician**: raise awareness; provide information and advice; support behaviour change; signpost to public health services; referral to other services/healthcare professionals **Support**: formal and informal sources of support
		4.2	Explain how the Pharmacy Technician can access **support** to develop own knowledge to promote public health initiatives and services to individuals	

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

An **individual** refers to someone requiring care or support; it will usually mean the person or people supported by the apprentice.

Learning outcome 1: Understand factors that influence health and well-being

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet that outlines how individual lifestyles can influence health and wellbeing. The information would need to include specific details of lifestyle such as diet and exercise, impacting factors such as biological, individual (for example genetic) and wider determinants and the effects of health and wellbeing on society. The leaflet should also refer to harmful lifestyle choices including substance misuse, recreational drug use and risky sexual behaviour. Apprentices should include authentic examples and/or evidence from practice (confidentially), so that the information has valid meaning.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the relationship between lifestyle and health and wellbeing, giving reasons, authentic examples and/or evidence from practice to support the points made (AC1.1)

2   examine methodically and in detail **four** factors that impact on health and wellbeing (AC1.2)

3   provide details of the impact of health and wellbeing on society, giving reasons, authentic examples and/or evidence from practice to support the points made (AC1.3).

Learning outcome 2: Understand relationship between public health and pharmacy services

An example of a suitable assignment to cover this learning outcome could be an induction workbook produced by the apprentice for new Pharmacy Technicians to complete, outlining the importance of the relationship between public health in communities and pharmacy services. The booklet would need to cover the following: functions of public health organisations (for example the National Health Service and Public Health England), such as health protection; the role of health promotion in relation to public health; the role of pharmacy services in supporting public health; the role of pharmacy services in current health promotion policies and campaigns – all centred on *intervention*.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the functions of public health organisations, giving reasons and examples to support the points made (AC2.1)

2   provide details of the role of health promotion in relation to public health, giving reasons, examples and/or evidence to support the points made (AC2.2)

3   provide details of the role of pharmacy services in supporting public health, giving reasons, examples and/or evidence to support the points made (AC2.3).

4   provide details of the role of pharmacy services in current health promotion policies, campaigns and interventions, giving reasons, examples and/or evidence to support the points made (AC2.4)

Learning outcome 3: Understand how principles of behaviour change can be applied to health promotion

An example of a suitable assignment to cover this learning outcome could be a short question and answer sheet. Apprentices would complete the assessment by providing relevant responses on how principles of behaviour change can be applied to health promotion. The questions would need to address the assessment criteria as set out below.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the principles of effective behaviour change, using the apprentice's own words (AC3.1)

2   provide details of individual, social and environmental factors that influence behaviour change, giving reasons and examples to support the points made (AC3.2)

3   give a clear account of individual, social and environmental barriers to behaviour change, using their own words (AC3.3)

4   provide details of how **three** health promotion approaches can affect behaviour change, giving reasons and examples to support the points made (AC3.4).

Learning outcome 4: Understand the role of the Pharmacy Technician in the promotion of public health

An example of a suitable assignment to cover this learning outcome could be a staff information leaflet aimed at Pharmacy Technicians. The leaflet would need to outline the role of the Pharmacy Technician in relation to health promotion activities such as raising awareness and providing information and advice. In addition, the leaflet would need to provide details on how Pharmacy Technicians can access support to develop their own knowledge in order to promote public health services and initiatives to individuals. This should include both colleagues and published resources.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   briefly set out **five** points showing how the role of the Pharmacy Technician relates to health promotion activities (AC4.1)

2   provide details of how the Pharmacy Technician can access formal and informal support to develop own knowledge to promote public health initiatives and services to individuals (AC4.2).

Textbooks

Clendon J, Munns A – *Community Health and Wellness: Principles of Primary Health Care*, 6th edition (Elsevier, 2018) ISBN 9780729542746

Naidoo J, Wills J – *Foundations for Health Promotion*, 4th edition
(Public Health and Health Promotion) (Elsevier, 2016) ISBN 9780702054426

Journals

Pharmaceutical Journal – www.pharmaceutical-journal.com/news-and-analysis/features/the-rise-of-the-pharmacy-technician-the-next-steps/20201326.article

Websites

www.gov.uk/government/organisations/public-health-england   Public Health England

www.hps.scot.nhs.uk/   Health Protection Scotland

www.publichealth.ie/   Public Health Ireland

www.publichealthwales.wales.nhs.uk/   Public Health Wales

Unit 5: Contribute to Service Improvement in the Delivery of Pharmacy Services

Level: 3

Credit value: 6

Guided Learning Hours: 30

Unit summary

This unit covers the knowledge and skills required to improve the delivery of pharmacy services. It covers how audit and quality improvement systems are part of service improvement. The unit also covers the knowledge and skills required to deliver pharmacy services for the benefit of individuals. Management of complaints is also included in the unit.

In this unit, you will develop your understanding of the principles of internal and external audit, and quality improvement strategies. You will consider the role of organisations responsible for external audit and how the audit process and outcomes contribute to service improvement. You will have the opportunity to explore how quality improvement contributes to service improvement. You will consider the importance of effective communication across organisations when working in partnership with them to improve the delivery of pharmacy services.

This unit gives you the opportunity to demonstrate that you have the skills and communication techniques required to obtain relevant information from individuals that will enable you to deliver a pharmacy service that will benefit them. You will also demonstrate your understanding of your organisation's policy for handling complaints and apply your knowledge of Standard Operating Procedures in recognising the limitations of your own competence or responsibility when dealing with complaints or conflict.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the principles of audit in pharmacy services	1.1	Explain the **principles** that underpin: • external audit • internal audit	**Principles**: process; recording; error reporting; reasons for audit; implications and outcomes of audit; roles and responsibilities in the audit process **Organisations**: Medicines and Healthcare, Products Regulatory Agency (MHRA); Care Quality Commission (CQC), General Pharmaceutical Council (GPhC)
		1.2	Describe the role of **organisations** responsible for external audit	
		1.3	Explain how audit contributes to service improvement	
2	Understand the principles of quality improvement in pharmacy services	2.1	Explain the **principles** that underpin quality improvement strategies	**Principles**: data and measurements; timelines; process mapping; evaluation; process and system redesign; standardisation; demand, capacity and workflow; involving and engaging others
		2.2	Explain how quality improvement contributes to service improvement	
3	Understand how partnership working contributes to improving the delivery of pharmacy services	3.1	Explain the importance of working with other **organisations** in pharmacy services	**Organisations** may include: suppliers; commercial organisations; NHS Trusts; Health Boards; care homes; community pharmacies; GPs; prisons
		3.2	Describe the benefits of effective communication across organisations	

Learning outcomes		Assessment criteria		Content
4	Be able to deliver pharmacy services for the benefit of individuals	4.1	Use **appropriate communication techniques** to obtain **relevant information**	**Appropriate communication techniques**: verbal; non-verbal; listening; questioning; showing empathy and sensitivity; adapting to the verbal and non-verbal forms of communication offered by the individual; checking own understand`ding of individual's needs or concerns
		4.2	Identify the needs of the individual	**Obtain relevant information**: needs/concerns; medicines history; personal circumstances
		4.3	Provide information clearly and in a way that the individual can understand	**Relevant products and services**: over the counter medicines advice; smoking cessation; prescribed medicines advice, electronic prescription service etc.
		4.4	Advise the individual about **relevant products and services** to meet their needs	
		4.5	Explain the advantages and disadvantages of each option for the individual and the organisation	
		4.6	Agree the best option with the individual and for the organisation	
		4.7	Refer any issues outside of own scope of competence to the relevant person	
		4.8	Explain the information that should be recorded in accordance with organisational policies and standards	

Learning outcomes		Assessment criteria		Content
5	Be able to respond to complaints	5.1	Explain the organisational policy relating to the handling of complaints	**Standard Operating Procedures**: skills and responsibilities; scope of role; interventions and referrals; handover
		5.2	Respond effectively to resolve complaints within scope of own competence	
		5.3	Refer any issues outside of the limits of own competence to the relevant person in accordance with **Standard Operating Procedures**	
		5.4	Explain the steps to take when conflict escalates beyond the scope of own competence	

Essential information for tutors and assessors

Essential resources

Facilities required for this unit include apprentice access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have current experience of pharmacy practice and show evidence of contact with the profession and continuing professional development, in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

This unit is expected to be assessed in the real working environment where the evidence is naturally occurring and is collected over a period of time. Further details are given later in this section.

Centres are responsible for deciding on the assessment activities that will enable apprentices to produce valid, sufficient, authentic and appropriate evidence to meet the assessment criteria. When planning delivery and assessment for this unit, centres may consider alignment with the Apprenticeship Standard.

Apprentices must be given a clear assessment brief before the assessment takes place, detailing:

- the assessment activity and context
- the learning outcome(s) to be assessed
- the criteria they are expected to meet
- the time and duration of the assessment.

Wherever possible, centres should adopt a holistic and integrated approach to assessing the skills-based units in the qualification. This gives the assessment process greater rigour, minimises repetition and saves time. The focus should be on assessment activities generated through naturally occurring evidence in the workplace, rather than on specific tasks. Taken as a whole, the evidence must show that the apprentice meets all learning outcomes and assessment criteria over a period of time. It should be clear in the assessment records where each learning outcome and assessment criterion has been covered and achieved.

Please refer to the guidance on selecting suitable assessment activities for the skills-based units, available on our website.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcomes 4 and 5 must be assessed in a real work environment by the assessor. For learning outcomes 4 and 5, simulation may be permitted if the apprentice is unable to generate evidence through normal work activity.

Learning outcome 1: Understand the principles of audit in pharmacy services

Learning outcome 2: Understand the principles of quality improvement in pharmacy services

Learning outcome 3: Understand how partnership working contributes to improving the delivery of pharmacy services

Learning outcomes 1, 2 and 3 assess knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover these learning outcomes could be presentation slides for a group of staff produced as part of a service review project, covering the principles of audit and quality improvement, and how partnership working helps to improve the delivery of pharmacy services. The presentation will need to explain the principles of internal and external audits, including an account of the roles of external audit organisations, and identify the positive contribution that audit makes to service improvements. The presentation will need to detail how quality improvement strategies contribute to service improvement. Finally, the presentation will need to consider the impact and importance of working with other organisations to provide the pharmacy service. It should emphasise the necessity for, and benefits of, effective communication. There is no need for apprentices to deliver the presentation.

To satisfy the assessment criteria for these learning outcomes, apprentices will:

1 provide details of the principles that underpin external audit and internal audit, giving reasons and examples to support the points made (AC1.1)

2 give a clear account of the role of **at least three** organisations responsible for external audit, using the apprentice's own words and including all the relevant information (AC1.2)

3 provide details of how audit contributes to service improvement, giving reasons and examples to support the points made (AC1.3)

4 provide details of **at least eight** principles that underpin quality improvement strategies (AC2.1)

5 provide details of how quality improvement contributes to service improvement, giving reasons and examples to support the points made (AC2.2)

6 assess, using detailed examples, the likely impacts of working with other organisations in pharmacy services, drawing a conclusion as to how important it is for an organisation to work with other organisations in pharmacy services (AC3.1)

7 give a clear account of the benefits of effective communication across organisations, using their own words and including all the relevant information (AC3.2).

Learning outcomes 4 and 5 assess skills. The primary method of assessment for these learning outcomes is observation in the workplace by the assessor.

Across the qualification's skills-based units there must be at least three observations which cover the required skills. Evidence should be generated over a period of time to show consistent performance. Expert witness testimony may be used where it is difficult for an assessor to observe aspects of practice. Expert witness testimony is NOT a substitute for the requirement of the three observations by the assessor across the qualification.

Textbooks

Burgess R, Moorhead J – *New Principles of Best Practice in Clinical Audit*, 2nd edition (Radcliffe Publishing, 2011) ISBN 9781846192210

Marshall B – *Beyond the Toolkit: Leading Quality Improvement in Health and Social Care* (Libri Publishing, 2018) ISBN 9781911450177

Wingfield J, Pitchford K – *Dale and Appelbe's Pharmacy and Medicines Law*, 11th edition (Pharmaceutical Press, 2017) ISBN 9780857112026

Websites

www.aptuk.org	Association of Pharmacy Technicians UK
www.cqc.org.uk	Care Quality Commission
www.doh.gov.uk	Department of Health and Social Care
www.england.nhs.uk	NHS England
www.healthscotland.scot	NHS Health Scotland
www.kingsfund.org.uk	The King's Fund
www.legislation.gov.uk	The National Archives
www.medicinescomplete.com	Medicines Complete
www.mhra.gov.uk	Medicines and Healthcare Products Regulatory Agency
www.nice.org.uk	National Institute for Health and Care Excellence
www.pharmaceutical-journal.com	*Pharmaceutical Journal* online
www.pharmacyQS.com	The quality systems resource for pharmacy
www.pharmacyregulation.org	General Pharmaceutical Council
www.rpharms.com	Royal Pharmaceutical Society
www.wales.nhs.uk	NHS Wales

Unit 6: Principles for the Management of Pharmaceutical Stock

Level: 3

Credit value: 8

Guided Learning Hours: 65

Unit summary

This unit covers knowledge of pharmaceutical stock control requirements, including ordering and receiving stock from the correct supplier and dealing with complex orders such as seasonal variations. The unit also covers the safe storage of stock and stock checking.

In this unit, you will develop your understanding of the legislation, regulatory governance and Standard Operating Procedures that apply to the management of pharmaceutical stock. You will explore the procurement considerations that apply to ordering pharmaceutical stock, including seasonal factors and special order requirements. You will learn the importance of good stock management and how to receive pharmaceutical stock, including dealing with discrepancies, correct storage requirements and stock rotation.

This unit gives you the opportunity to explore the implications of problems with stock availability and discrepancies with orders, including the possible impact of these problems on individuals' care. You will consider the actions required to resolve stock problems. Effective communication is essential to your work as a Pharmacy Technician, so you will consider the importance of notifying the appropriate people when stock problems are identified.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand governance requirements relating to the **management** of pharmaceutical stock	1.1	Describe **legislation and regulatory governance** that applies to the management of pharmaceutical stock	**Management** includes: ordering; receiving; maintaining **Legislation** may include that which is relevant to: supplying medicines; ordering licensed, unlicensed and clinical trials medication; data protection; equality and diversity; health and safety **Regulatory governance**: General Pharmaceutical Council Professional Standards; Current NICE guidance *Continued on next page*
		1.2	Summarise a range of **procurement considerations** that apply to the ordering of pharmaceutical stock	
		1.3	Explain the importance of following **Standard Operating Procedures (SOPs)** for the management of pharmaceutical stock	

Learning outcomes	Assessment criteria	Content
		Continued from previous page **Procurement considerations** may include: license requirements, e.g. Wholesale Distribution Authorisation (WDA) or Wholesale Dealers Licence (WDL); Falsified Medicines Directive; Appropriate Transmissible Spongiform Encephalopathies (TSE) certificates for unlicensed drugs; genuine customers; unlicensed medicine requirements; parallel imports quality control, e.g. certificates of conformity/analysis; financial considerations; controlled drug requirements; automated drugs cabinets; local or regional pharmaceutical contracts; commercial medicines units; Investigational Medicinal Products (IMPs) **Standard Operating Procedures** may include: risk management, incident management and error reporting systems, safe storage of medicines, handling of cytotoxic or controlled drugs, automated ordering, use of technology, use of personal protective equipment (PPE)

Learning outcomes		Assessment criteria		Content
2	Understand the considerations for ordering pharmaceutical stock	2.1	Describe the order requirements for **pharmaceutical stock**	**Pharmaceutical stock**: containing the correct: item(s); form; strength; amount required; doses; the impact of the formulation on the route of administration
		2.2	Discuss the influence of **seasonal factors** when ordering pharmaceutical stock	**Seasonal factors**: the importance of taking account of seasonal variations when ordering pharmaceutical stock; the importance of ensuring that stock is available based on the needs of individuals; the impact stock availability may have on the care of individuals
		2.3	Explain the importance of **special order requirements** when ordering pharmaceutical stock	
		2.4	Summarise how **orders are placed** in accordance with Standard Operating Procedures	**Special order requirements** including: knowing the differences between licensed, unlicensed, specials, controlled drugs, imported and clinical trials medicines. The importance of the procurement and quality assurance process when ordering this stock
		2.5	Explain the difference between generic and branded medicines	
				Continued on next page

Learning outcomes	Assessment criteria	Content
		Continued from previous page
		Orders are placed: know how to place an order with the appropriate supplier following Standard Operating Procedures; understand the necessary checks for ordering and appropriate person to approve orders; know the sources and suppliers of stock; understand processes for:
		• ordering with the correct supplier/location
		• using the documentation/method required in accordance with Standard Operating Procedure
		Understand the difference between branded and generic medicines and the importance of brand specific requests

Learning outcomes		Assessment criteria		Content
3	Understand how to complete the procurement process for pharmaceutical stock	3.1	Explain the **process** for procuring pharmaceutical stock	**Process**: local policy and procedures including how to order unlicensed medication; electronic ordering systems; written orders; contract parameters
		3.2	Explain the **possible implications** of outstanding orders	**Possible implications**: impact stock availability has on the care of individuals
		3.3	Evaluate the **options** for dealing with outstanding orders	**Options**: action to be taken if stock is unavailable; action required to ensure that the care of individuals is not affected; monitoring progress of outstanding orders
		3.4	Explain the importance of notifying the **appropriate person(s)** of changes in pharmaceutical stock availability	**Appropriate person(s)**: line manager; pharmacist; individual; Pharmacy Technician or supervisor

Learning outcomes		Assessment criteria		Content
4	Understand how to receive pharmaceutical stock	4.1	Explain the process of confirming receipt of deliveries in accordance with **Standard Operating Procedures**	**Standard Operating Procedures**: current local guidelines that apply to the receipt of pharmaceutical stock including documentation requiring completion upon receipt of orders
		4.2	Discuss how to deal with **discrepancies** with received pharmaceutical stock	**Discrepancies**: the action to be taken if there are any discrepancies with received stock, including stock:
		4.3	Explain how drug recall procedures are implemented	• is not on the original order • is not the complete order
		4.4	Explain the **impact on individuals' care** if orders are not received	• is short dated or expired • has the wrong batch number
		4.5	Explain the importance of notifying the **appropriate person** of any problems regarding the receipt of pharmaceutical stock	• is damaged, contaminated or suspected to be counterfeit • has not been stored correctly during transportation • quarantine procedures
				Drug recall: local and national recall procedures, how and why these are initiated and followed; understanding the supply chain – product alternatives; certificates of analysis and conformity
				Continued on next page

Learning outcomes		Assessment criteria		Content
				Continued from previous page
				Impact on individuals' care: understand the importance of how receiving the correct form and quantity of stock can affect the care of individuals; identify the different forms of medicines and why it is important to stock appropriate quantities of the cor`rect form and strength
				Appropriate person: identify the appropriate person to notify of the availability of the stock where the goods received are for a special or an outstanding order or not available, e.g. manager, colleagues, the individual

Learning outcomes		Assessment criteria		Content
5	Understand how to store pharmaceutical stock	5.1	Explain the importance of placing received stock in correct storage taking into account: • **storage requirements** • **stock rotation procedures**	**Storage requirements**: location; transport and secure storage arrangements; maintenance of cold chain, cytotoxic/radiopharmaceutical materials; clinical trials; controlled drugs; volatile; flammable; routine; ambient`
		5.2	Explain the importance of maintaining the cold chain	**Stock rotation procedures**: understand the importance of stock rotation and the safe storage of stock; reasons for ensuring stock rotation occurs to reduce wastage
		5.3	Explain how to ensure that storage conditions are fit for purpose	**Consequences**: waste; cost; availability; care of the individual
		5.4	Discuss the **consequence**s of storage conditions not being maintained	
		5.5	Explain how to dispose of outdated, damaged or contaminated stock in line with Standard Operating Procedures	

Learning outcomes		Assessment criteria		Content
6	Understand how to carry out pharmaceutical stock management	6.1	Explain the importance of good **stock management**	**Stock management** including: the quantity of stock, taking account of stock usage and seasonal variations; the input and retrieval of stock data to ensure levels are appropriate: • stock rotation • checking expiry dates of stock` • identifying damaged, contaminated or deteriorated stock Understand reasons for ensuring stock rotation occurs to reduce wastage; understand how automation is used to control stock; know the importance of recording, storing and retrieving stock information in accordance with organisational procedures *Continued on next page*
		6.2	Evaluate ways of managing overstocking	
		6.3	Explain the purpose of **stock checks** and what they should include	
		6.4	Explain the **action** to be taken in respect of expired and damaged stock	

Learning outcomes		Assessment criteria		Content
				Stock checks: know the purpose of carrying out stock checks at regular intervals following agreed guidelines to ensure stocks remain:
				• stored appropriately and in a suitable condition
				• in sufficient quantity
				• consistent with computerised records where appropriate
				The importance of taking appropriate action if stock is unavailable; the consequences of over stocking
				Action to be taken if stock:
				• is short dated or expired
				• is damaged or contaminated
				• has a batch number for which drug alerts/recalls have been issued
				• has been returned to the pharmacy

Essential information for tutors and assessors

Essential resources

Facilities required for this unit include apprentice access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have current experience of pharmacy practice and show evidence of contact with the profession, and continuing professional development, in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcome 1: Understand governance requirements relating to the management of pharmaceutical stock

An example of a suitable assignment to cover this learning outcome could be a poster to be displayed in a work area as a reference for staff on governance requirements for the management of pharmaceutical stock. The poster would need to set out procurement considerations for ordering pharmaceutical stock and give reasons for following Standard Operating Procedures.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of the legislation and regulatory governance that applies to the management of pharmaceutical stock, using their own words and including all relevant information (AC1.1)

2 briefly set out **at least seven** procurement considerations that apply to the ordering of pharmaceutical stock (AC1.2)

3 give reasons why it is important to follow Standard Operating Procedures (SOPs) for the management of pharmaceutical stock, providing examples to support the points made (AC1.3).

Learning outcome 2: Understand the considerations for ordering pharmaceutical stock

Learning outcome 3: Understand how to complete the procurement process for pharmaceutical stock

Learning outcome 4: Understand how to receive pharmaceutical stock

An example of a suitable assignment to cover these learning outcomes could be a training guide for the induction of new staff, covering the processes for ordering, procuring and receiving pharmaceutical stock. The training guide would need to provide a summary of the ordering requirements for pharmaceutical stock and how orders are placed in accordance with Standard Operating Procedures. It would also need to detail considerations given to seasonal factors and special order requirements, and include an explanation of the difference between generic and branded medicines. The training guide would also need to explain the process for procuring pharmaceutical stock, including the implications of outstanding orders and the action to be taken if stock is unavailable, including reasons for notifying an appropriate person. The training guide would need to provide a summary of the receipt of pharmaceutical stock in accordance with Standard Operating Procedures. It would also identify how to deal with drug recalls and discrepancies, explaining the impact on individuals' care if they are not resolved and reasons for notifying an appropriate person.

To satisfy the assessment criteria for these learning outcomes, apprentices will:

1 give a clear account of the order requirements for pharmaceutical stock, using their own words and including all relevant information (AC2.1)

2 provide details of the influence of seasonal factors when ordering pharmaceutical stock, suggesting possible courses of action to address likely issues in **at least three** different seasonal situations (AC2.2)

3 give reasons why special order requirements are important when ordering pharmaceutical stock, using examples to support the points made (AC2.3)

4 briefly set out how orders are placed in accordance with Standard Operating Procedures (AC2.4)

5 provide details of the difference between generic and branded medicines, giving reasons and examples to support the points made (AC2.5)

6 provide details of the process for procuring pharmaceutical stock, giving reasons and examples to support the points made (AC3.1)

7 provide details of the possible implications of outstanding orders, giving reasons and examples to support the points made (AC3.2)

8 review the options for dealing with outstanding orders, drawing on the advantages and disadvantages of each option in order to come to a decision (AC3.3)

9 give reasons why it is important to notify the appropriate person(s) of changes in pharmaceutical stock availability, using examples to support the points made (AC3.4)

10 provide details of the process of confirming receipt of deliveries in accordance with Standard Operating Procedures, giving reasons and examples to support the points made (AC4.1)

11 provide details of how to deal with discrepancies with received pharmaceutical stock, suggesting possible courses of action for **at least five** different types of discrepancy (AC4.2)

12 provide details of how drug recall procedures are implemented, giving reasons and examples to support the points made (AC4.3)

13 provide details of the impact on individuals' care if orders are not received, giving reasons and examples to support the points made (AC4.4)

14 give reasons why it is important to notify the appropriate person of any problems regarding the receipt of pharmaceutical stock, using examples to support the points made (AC4.5).

Learning outcome 5: Understand how to store pharmaceutical stock

An example of a suitable assignment to cover this learning outcome could be a poster to be displayed in a work area as a reference for staff, identifying the correct storage locations, specifying the maintenance of storage conditions and cold chain supplies to ensure that stock remains fit for purpose. To underpin the importance of correct storage, the poster will need to give examples of the consequences of not maintaining storage conditions and the cold chain. The poster could contain a flow diagram detailing how to dispose of pharmaceutical waste using the correct waste stream, in accordance with Standard Operating Procedures, to include outdated, damaged, contaminated or denatured stock.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give reasons why it is important to place received stock in correct storage, using examples to support the points made. Reference must be made to storage requirements and stock rotation procedures (AC5.1)

2   give reasons why it is important to maintain the cold chain, using examples to support the points made (AC5.2)

3   provide details of how to ensure that storage conditions are fit for purpose, giving reasons and examples to support the points made (AC5.3)

4   provide details of **at least three** possible consequences if storage conditions are not maintained. Reference must be made to effects on the pharmacy and individuals (AC5.4)

5   provide details of how to dispose of outdated, damaged or contaminated stock in line with Standard Operating Procedures, giving reasons and examples to support the points made (AC5.5).

Learning outcome 6: Understand how to carry out pharmaceutical stock management

An example of a suitable assignment to cover this learning outcome could be presentation slides for a group of staff promoting good stock management and giving examples of how this can be achieved. The presentation slides will need to address how overstocking can be managed and how to deal with expired and damaged stock, as well as detailing the benefits of completing stock checks. There is no need for apprentices to deliver the presentation.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give reasons why good stock management is important, using examples to support the points made (AC6.1)

2   review ways of managing overstocking, drawing on the advantages and disadvantages of each way in order to come to a conclusion (AC6.2)

3   provide details of the purpose of stock checks and what they should include, giving reasons and examples to support the points made (AC6.3)

4   provide details of the action to be taken in respect of expired and damaged stock, giving reasons and examples to support the points made (AC6.4).

Textbooks

Merrills J, Fisher J – *Pharmacy Law and Practice*, 5th edition (Academic Press, 2013) ISBN 9780123942890

Royal Pharmaceutical Society – *Medicines, Ethics and Practice* (Pharmaceutical Press, current, published annually in July)

Wingfield J, Pitchford K – *Dale and Appelbe's Pharmacy and Medicines Law*, 11th edition (Pharmaceutical Press, 2017) ISBN 9780857112026

Websites

www.cppe.ac.uk	Centre for Pharmacy Postgraduate Education
www.doh.gov.uk	Department of Health and Social Care
www.gov.uk/government/publications/guidance-on-the-safe-management-of-healthcare-waste	Environment and sustainability, Health Technical Memorandum 07-01: Safe management of healthcare waste
www.legislation.gov.uk	The National Archives
www.medicinescomplete.com	Medicines Complete
www.mhra.gov.uk	Medicines and Healthcare Products Regulatory Agency
www.pharmaceutical-journal.com	*Pharmaceutical Journal* online
www.pharmacyregulation.org	General Pharmaceutical Council
https://psnc.org.uk	Pharmacy Services Negotiating Committee
www.sps.nhs.uk	Specialist Pharmacy Service

Unit 7: Undertake Medicines Reconciliation and Supply

Level:	4
Credit value:	12
Guided Learning Hours:	60

Unit summary

This unit covers the skills that a Pharmacy Technician will need to be able to take and reconcile a medication history. Underpinning knowledge about medicines and their action and use are covered in other units in this qualification. This unit includes the identification of discrepancies and issues that may arise as part of the process and dealing with them in an appropriate manner. The unit also covers assessing the suitability of an individual's own medicines for use. It includes determining whether the medicines are suitable and reordering medicines and products to ensure that the individual maintains a sufficient supply.

In this unit, you will develop your understanding of the legislation, national guidelines and Standard Operating Procedures that govern all areas of medicines reconciliation and supply. You will develop your skills in order to demonstrate your ability to take a medication history from an individual accurately, verify its accuracy using a range of sources and use this information to reconcile with currently prescribed medication. You will demonstrate your ability to assess the suitability of individuals' own medicines or products for use and make arrangements for appropriate handling of unsuitable items. You will also make appropriate decisions regarding any necessary future supplies of medicines or products in line with procedures.

This unit gives you the opportunity to demonstrate skills in interacting positively with individuals, using questioning and listening skills effectively to gain the required information. You will show how to overcome barriers to communication to ensure that you can discuss with individuals how to optimise their medication to achieve the best possible outcome.

This unit requires you to show awareness that you are working within your limitations as a Pharmacy Technician and to demonstrate your understanding of when you should refer queries outside your scope of competence to an appropriate person.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand governance requirements for retrieving and reconciling information about an individual's medicines	1.1	Describe **legislation and standards** relating to retrieving and reconciling information about an individual's medicines	**Current legislation and standards**: health and safety; valid consent; information governance; data protection; General Pharmaceutical Council Standards for Pharmacy Professionals
		1.2	Describe **national guidelines** relating to retrieving and reconciling information about an individual's medicines	**National guidelines**: current NICE guidance; Royal Pharmaceutical Society
		1.3	Describe how **other governance requirements** relate to retrieving and reconciling information about an individual's medicines	**Other governance requirements**: risk management, incident management and error reporting systems, Patient Medication Records

Learning outcomes		Assessment criteria		Content
2	Be able to take a medication history from individuals	2.1	**Communicate** with **individuals** in a manner appropriate to their needs	**Communicate**: using verbal and non-verbal communication techniques; confirming valid consent; capacity; disability, behaviours, recognising diversity, values and beliefs; identifying barriers to effective communication and how to overcome/address these; clarifying information that is not clear
		2.2	Discuss the **purpose** of the consultation with the individual	
		2.3	Use appropriate **questioning techniques** to determine the individual's **medication history**	**Individuals** may include: patients; third parties; carers
		2.4	Establish the details of any **adverse drug reactions or interactions**	**Purpose**: safety of the individual; help individual with any medicines-related issues; identify any discrepancies; provide individual with opportunity to ask questions
		2.5	Determine whether the medication remains **suitable** for the individual	
		2.6	Refer queries outside of own scope of competence to the **appropriate person**	**Questioning techniques** including: open and closed questions; funnel questions; probing questions
				Continued on next page

Learning outcomes		Assessment criteria		Content
				Continued from previous page
				A **medication history** should include: determining the following: patient identity; allergy status; medicines that have been started recently; medicines that have stopped; medicines that have changed; medicines that are used regularly; medicines that are used occasionally; medicines that are swapped or shared between individuals or their family and friends; medicines that are bought from other sources; medicines prescribed by the hospital
				Depending on your work setting you may also include: if the individual drinks alcohol, smokes or uses other substances; issues that may impact on the individual using their medicines; clinical trials medication; any omissions; psychological, occupational and social aspects and implications for individuals living with conditions
				Consideration should also be given to the use of unlicensed medicines, imported medicines and other licensed high-risk medicines included in local policies and in safety alerts.
				Continued on next page

Learning outcomes	Assessment criteria	Content
		Continued from previous page
		Adverse drug reactions or interactions: an unwanted or harmful reaction experienced following the administration of a drug or combination of drugs under normal conditions of use and is suspected to be related to the drug. An ADR will usually require the drug to be discontinued or the dose reduced
		Suitable: any medication-related side effects or contra-indications experienced; concordance with medication
		Appropriate person may include: line manager; pharmacist; supervisor

Learning outcomes		Assessment criteria		Content
3	Be able to verify the accuracy of the individual's medication history	3.1	Obtain information from a **range of available sources** to validate the accuracy of the medication history	**Range of available sources** may include: individual's own medication; individual, carer or key persons; patient medication record; medical notes; medication chart; repeat prescription; compliance aids; electronic medication records; other healthcare professionals; community chemist; Medicine Administration Record charts; hospital records; clinical trials; medicine use review sheet (MUR)
		3.2	Explain the **benefits** of the available sources used to validate the accuracy of the medication history	
		3.3	Explain the **limitations** of the available sources used to validate the accuracy of the medication history	**Benefits** and **limitations**: reliability; validity; currency; consistency; origin of the source
		3.4	**Verify** the accuracy of the medication history	**Verify**: in line with Standard Operating Procedures

Learning outcomes		Assessment criteria		Content
4	Be able to reconcile the verified medication history with the list of medicines currently prescribed	4.1	Compare the verified medication history with **the list of medicines that are currently prescribed for the individual**	**List of medicines that are currently prescribed**: in-patient drug chart; Medication Administration Record (MAR); discharge letter
		4.2	Refer discrepancies to the **appropriate person** in line with organisational requirements	**Appropriate person**: line manager; pharmacist; supervisor; doctor; individual; multidisciplinary team; nurse
		4.3	Explain the **action to take** if the individual's medicines could not be reconciled	**Action to take**: communicating outcome to relevant people
		4.4	Explain the importance of **recording** the outcomes of the medicine reconciliation in line with governance requirements	**Recording**: details that should be recorded and the reasons why these are important and the format to be used; records must be accurate and legible for use and audit purposes

Learning outcomes		Assessment criteria		Content
5	Be able to assess individuals' own medicines or products for use	5.1	Explain the **purpose** of checking the individual's own medicines or products for use	**Purpose** of checking individual's medicines may include: whether they are fit for purpose; whether they are suitable for use (e.g. have they been stored correctly, have the medicines expired etc.); whether they have an adequate initial and repeat supply; if route of administration and medication form is appropriate
		5.2	Identify any **issues** with the individual's medication or products	
		5.3	Assess any issues with the individual's medication or products	
		5.4	Discuss with the individual how to **optimise** their medication to achieve the best outcomes in line with Standard Operating Procedures	**Issues**: possible medication issues may include: excessive use; under use; not using for intended purpose; discrepancies; implications; expiry dates; route of administration and medication form; suitability of medicines
		5.5	Make decisions regarding the **appropriate handling** of unsuitable items in line with organisational procedures	**Optimise**: supporting concordance; understanding; decision making; problem solving (e.g. manual dexterity issues); communicating changes to medication
		5.6	Take action in line with organisational requirements if there are any issues beyond scope of competence	**Appropriate handling**: removal; destruction; quarantine; appropriate storage

Learning outcomes		Assessment criteria		Content
6	Be able to order medicines and products for individuals to ensure sufficient supply	6.1	Review the medicines that have been prescribed for the individual to identify the correct medicine/product to be ordered	**Issues**: where stock is not available; dispensing errors and near misses **Appropriate person**: line manager; pharmacist; Pharmacy Technician; supervisor
		6.2	Order the medicine/product in accordance with organisational procedures	
		6.3	Identify any **issues** relating to initial or repeat supply and take the necessary action	
		6.4	Refer any issues outside of own scope of competence to the **appropriate person**	
		6.5	Complete the relevant documentation in line with organisational requirements	

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this unit will require access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors. Apprentices will need to be able to undertake a patient-facing role. Standard Operating Procedures should be in place for all tasks required in the unit and all health and safety requirements must be in place.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have current experience of pharmacy practice and show evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a range of resources, including Standard Operating Procedures, relevant books, journals and websites.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

This unit is expected to be assessed in the real working environment where the evidence is naturally occurring and is collected over a period of time. Further details are given later in this section.

Centres are responsible for deciding on the assessment activities that will enable apprentices to produce valid, sufficient, authentic and appropriate evidence to meet the assessment criteria. When planning delivery and assessment for this unit, centres may consider alignment with the Apprenticeship Standard.

Apprentices must be given a clear assessment brief before the assessment takes place, detailing:

- the assessment activity and context
- the learning outcome(s) to be assessed
- the criteria they are expected to meet
- the time and duration of the assessment.

Wherever possible, centres should adopt a holistic and integrated approach to assessing the skills-based units in the qualification. This gives the assessment process greater rigour, minimises repetition and saves time. The focus should be on assessment activities generated through naturally occurring evidence in the workplace, rather than on specific tasks. Taken as a whole, the evidence must show that the apprentice meets all learning outcomes and assessment criteria over a period of time. It should be clear in the assessment records where each learning outcome and assessment criterion has been covered and achieved.

Please refer to our guidance on selecting suitable assessment activities for the skills-based units, available on our website.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcomes 2, 3, 4, 5 and 6 must be assessed in a real work environment by the assessor. There should be a minimum of three holistic observations over a period of time, which should include collecting accurate information correctly from a range of sources for a range of different individuals.

For AC2.3, medication history must include: determining the following: patient identity; allergy status; medicines that have been started recently; medicines that have stopped; medicines that have changed; medicines that are used regularly; medicines that are used occasionally; medicines that are swapped or shared between individuals or their family and friends; medicines that are bought from other sources; medicines prescribed by the hospital.

For AC3.1, range of sources used must include: individual's own medication; individual, carer or key people; patient medication record (which may be electronic).

For learning outcome 5, a formative competence assessment log must be completed that can be used in the overall portfolio for the qualification and should cover the checking of 100 items of an individual's own drugs (patient's own drugs) and appropriate decisions about the suitability of these items.

The following units must be achieved before undertaking this unit:

- *Unit 1: Principles of Person-centred Approaches for Pharmacy Technicians*
- *Unit 16: Actions and Uses of Medicines.*

Individual's medicines could include:

- prescribed medicines
- controlled drugs
- compliance aids
- over the counter medicines
- herbal medicines, vitamins and food supplements
- homeopathic medicines.

Helpful resource: Consultation Skills for Pharmacy
http://www.consultationskillsforpharmacy.com/

Learning outcome 1: Understand governance requirements for retrieving and reconciling information about an individual's medicines

Learning outcome 1 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be a pocket guide for new staff members that outlines legislation, Standard Operating Procedures, current guidelines and other governance requirements relevant to retrieving and reconciling information on an individual's medicines. (This could be linked to the assignment for *Unit 8: Assemble and Check Dispensed Medicines and Products*, learning outcome 1.)

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of legislation and standards relating to retrieving and reconciling information about an individual's medicines, using their own words and including all the relevant information (AC1.1)

2   give a clear account of national guidelines relating to retrieving and reconciling information about an individual's medicines, using their own words and including all the relevant information (AC1.2)

3   give a clear account of how other governance requirements relate to retrieving and reconciling information about an individual's medicines, using their own words and including all the relevant information (AC1.3).

Learning outcomes 2, 3, 4, 5 and 6 assess skills. The primary method of assessment for these learning outcomes is observation in the workplace by the assessor.

Across the qualification's skills-based units there must be at least three observations that cover the required skills. Evidence should be generated over a period of time to show consistent performance. Expert witness testimony may be used where it is difficult for an assessor to observe aspects of practice. Expert witness testimony is NOT a substitute for the requirement of the three observations by the assessor across the qualification.

Textbooks

British National Formulary (Pharmaceutical Press, current edition)

British National Formulary for Children (Pharmaceutical Press, current edition)

Royal Pharmaceutical Society – *Medicines, Ethics and Practice* (Pharmaceutical Press, current edition, published annually in July)

Wingfield J, Pitchford K – *Dale and Appelbe's Pharmacy and Medicines Law*, 11th edition (Pharmaceutical Press, 2017) ISBN 9780857112026

Websites

www.aptuk.org	Association of Pharmacy Technicians UK
www.cppe.ac.uk	Centre for Pharmacy Postgraduate Education
www.doh.gov.uk	Department of Health and Social Care
www.gov.uk/government/ organisations/medicines-and-healthcare-products-regulatory-agency	Medicines and Healthcare Products Regulatory Agency
www.legislation.gov.uk	The National Archives
www.medicinescomplete.com	Medicines Complete
www.nice.org.uk	National Institute for Health and Care Excellence
www.pharmacyregulation.org	General Pharmaceutical Council
www.rpharms.com	Royal Pharmaceutical Society
www.who.int	World Health Organisation

Apps (available on Apple and Android)

BNF	British National Formulary
BNFC	British National Formulary for Children

Unit 8: Assemble and Check Dispensed Medicines and Products

Level: 4

Credit value: 8

Guided Learning Hours: 30

Unit summary

The aim of this unit is to give apprentices the technical skills and knowledge needed to assemble and check dispensed medicines and products. The unit covers the process that apprentices are required to follow, along with the necessary checks of their own and others' assembled medicines and products. It also covers the process for dealing with errors and the requirements for recording and reporting.

In this unit, you will develop your understanding of the legislation and Standard Operating Procedures that govern all areas of assembling and checking dispensed items. You will develop your skills in order to demonstrate your ability to assemble a range of prescribed items accurately, following all required processes for labelling, packaging and recording relevant information. You will demonstrate that you have developed a comprehensive in-process accuracy check that allows you to detect errors and reflect on them.

Building on these skills, you will be given the opportunity to demonstrate the ability to perform accuracy checks of others' dispensed medicines or products, in line with Standard Operating Procedures. You will be able to demonstrate your communication skills and interact positively with individuals when errors are detected, guiding them through the required reporting procedures and providing information and advice according to their needs.

This unit requires you to show awareness that you are working within your limitations as a Pharmacy Technician and to demonstrate your understanding of when you should refer queries outside your scope of competence to an appropriate person.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand governance requirements for assembling and checking dispensed medicines and products	1.1	Summarise **legislation** that applies to assembling and checking dispensed medicines and products	**Legislation** to include as a minimum: legal requirements relevant to assembling and checking dispensed medicines and products; the role of others in the organisation; health and safety and how it applies to the working environment
		1.2	Summarise Standard Operating Procedures relating to assembling and checking dispensed medicines and products	**Standard Operating Procedures**: the importance of working within the limits of own competence and authority; when to seek agreement or permission from others and when to refer on to an appropriate person; understand how vicarious liability, negligence and Duty of Care relate to work of a Pharmacy Technician
		1.3	Explain the importance of following **Standard Operating Procedures** when assembling and checking dispensed medicines and products	
		1.4	Describe when and why Patient Medication Records (PMRs) are used	**Guidelines**: the relevant national and local guidelines, policies and procedures that are available and how and when they should be accessed for example, information governance
		1.5	Explain the current **guidelines** that apply when assembling and checking dispensed medicines and products	

Learning outcomes		Assessment criteria		Content
2	Understand processes for assembling dispensed items	2.1	Describe the stages of the dispensing procedure	**Clinical screen**: legal requirements; clinical appropriateness; compliant with formulary
		2.2	Describe the principles of a **clinical screen**	**Precautions** to include: personal hygiene; maintaining a clean environment; use of protective clothing; procedures to minimise risk
		2.3	Explain how to confirm a clinical screen has been completed	**Formats for prescriptions** to include: paper based; electronic
		2.4	Explain the **precautions** for assembling dispensed items	**Relevant items** could include: prescribed items; Patient Information Leaflets (PILs); suitable devices and sundries
		2.5	Describe factors that can cause deterioration of stock	
		2.6	Explain who can legally prescribe and the **different formats for prescriptions**	
		2.7	Explain the different types of prescription forms and the range of medicines and products which may be dispensed on each	
		2.8	Explain the importance of selecting the correct equipment for safe handling and use	
		2.9	Describe the processes for reconstitution	

Learning outcomes		Assessment criteria		Content
		2.10	Explain importance of storage conditions and expiry dates	
		2.11	Explain the importance of supplying **relevant items**	
		2.12	Explain the importance of recording, storing and retrieving information in accordance with organisational procedures	
3	Understand processes for packing and labelling prescribed items	3.1	Explain the use of **different container types and closures**	**Different container types and closures** may include: glass bottles; plastic bottles; cartons; syringes; infusion bags; syringe drivers; dropper bottles; ampoules
		3.2	Explain the **legal requirements** for labelling medicines and products and prescribing conventions	**Legal requirements**: Humans Medicines Regulations 2012 (Medicines Act 1968)
		3.3	Explain the reasons for **annotating or endorsing** prescriptions	**Annotating or endorsing**: legal requirements; payment; audit trail
		3.4	Explain records and documentation which need to be completed as part of the dispensing process	

Learning outcomes		Assessment criteria		Content
4	Understand processes for preventing and dealing with dispensing errors and near misses	4.1	Describe the causes and consequences of near misses and dispensing errors	**Methods** to include: risk assessment and how it is used to grade dispensing errors
		4.2	Explain how dispensing errors can be rectified	
		4.3	Explain the importance of error reporting and how this impacts on practice	
		4.4	Describe procedures for communicating and documenting dispensing errors and near misses	
		4.5	Explain **methods** for preventing dispensing errors	
		4.6	Explain how to use dispensing errors or near misses as an opportunity to reflect on future practice	

Learning outcomes		Assessment criteria		Content
5	Be able to label and dispense prescribed items	5.1	**Prepare self and area** for dispensing	**Prepare self and area** should include the following: confirming the prescription is legal, valid, appropriate to the individual and correctly written; use of protective clothing in line with dispensed medicine or product; maintaining a clean working environment and equipment during dispensing process; identifying sources of contamination and taking appropriate action
		5.2	Generate a label accurately including all additional and cautionary labels and warnings as necessary	
		5.3	Prepare the medicine or product using the correct equipment, processes and calculations	
		5.4	Confirm the **appropriateness** of the medicine or product in line with Standard Operating Procedures	**Appropriateness** to include: matching the medicine or product to the prescription or requisition including strength and form; checking that the medicine or product will remain in date for the course of the treatment; checking the medicine or product is fit for purpose
		5.5	Confirm the **label** on the item matches the assembled product and the prescription or request requirements in line with Standard Operating Procedures	**Label** to include: form; strength; dosage
				Packaging: correct packaging e.g. child resistant containers, Monitored Dosage Systems (MDS), syringes, fluted bottles.
		5.6	Confirm the correct quantity has been assembled in line with the prescription requirements	**Inconsistencies** could include: expiry date; insufficient stock; insufficient stock of specific strengths; to-follows; specific brand required
		5.7	Assemble prescribed items according to the correct instructions and reconstitute as required	*Continued on next page*

Learning outcomes	Assessment criteria		Content
	5.8	Pack the medicine or product in the correct **packaging**	*Continued from previous page*
	5.9	Take appropriate action where there are **inconsistencies** with the medicine or product	**Accuracy check** to include: confirm the prescription has been clinically screened and endorsed by an appropriate person; check that the correct item has been dispensed in the correct form and correct strength; check that the correct quantity has been dispensed or arrangements made for further supply as indicated on the prescription; check that the label on each item matches the dispensed product and the prescription requirements including:
	5.10	Select relevant medicine device or sundry items as necessary to accompany the medicine or product	
	5.11	Complete all necessary records and documentation	
	5.12	Perform an in-process **accuracy check** on dispensed medicines and products	• individual's name • drug name, form and strength • quantity • directions for use
	5.13	Forward the prescription or request and assembled items for accuracy checking as identified in the Standard Operating Procedures	• advisory and cautionary warnings • expiry and storage instructions if applicable check that the assembled items are fit for purpose; check appropriate packaging has been used; check appropriate selection of medicine devices or sundry items to accompany the medicine or product; rectify any identified dispensing errors

Learning outcomes		Assessment criteria		Content
6	Be able to check the accuracy of others dispensing of medicines and products against valid prescriptions	6.1	Perform **accuracy checks of others'** dispensed medicines or products in line with Standard Operating Procedures	**Accuracy checks of others** to include: confirm the prescription has been clinically screened and endorsed by an appropriate person; check that the correct item has been dispensed in the correct form and correct strength; check that the correct quantity has been dispensed or arrangements made for further supply as indicated on the prescription; check that the label on each item matches the dispensed product and the prescription requirements including:
		6.2	Record any dispensing errors and near misses in the correct documentation format	
		6.3	Check the **packaging and labelling requirements** for medicines and products in line with Standard Operating Procedures	• individual's name • drug name, form and strength • quantity
		6.4	Annotate prescriptions and other dispensary records in line with Standard Operating Procedures	• directions for use
		6.5	Apply knowledge of pharmaceutical calculations and calculating quantities of medicines	• advisory and cautionary warnings • expiry and storage instructions if applicable check that the assembled items are fit for purpose; check appropriate packaging has been used; check appropriate selection of medicine devices or sundry items to accompany the medicine or product; rectify any identified dispensing errors *Continued on next page*

Learning outcomes		Assessment criteria		Content
				Continued from previous page **Packaging and labelling requirements** to include: prescribing conventions, abbreviations and medical terminology; the proprietary and generic names of medicines; the different form, strengths and doses of medicines
7	Be able to resolve dispensing errors and near misses	7.1	Identify any dispensing errors and near misses	**Communicate to the appropriate person** may include: informing dispensers of the dispensing error or near misses as necessary **Record** using the appropriate documentation and recording requirements in line with local policies and procedures **Standard Operating Procedures** including documentation, referrals etc.
		7.2	Ensure dispensing errors and near misses are rectified and **communicate to the appropriate person** in accordance with Standard Operating Procedures	
		7.3	**Record** dispensing errors and near misses in accordance with **Standard Operating Procedures**	

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this unit will require access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors. Standard Operating Procedures should be in place for all tasks required in this unit and all health and safety requirements must be in place.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have current experience of pharmacy practice and show evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a range of resources, including Standard Operating Procedures, relevant books, journals and websites.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

This unit is expected to be assessed in the real working environment where the evidence is naturally occurring and is collected over a period of time. Further details are given later in this section.

Centres are responsible for deciding on the assessment activities that will enable apprentices to produce valid, sufficient, authentic and appropriate evidence to meet the assessment criteria. When planning delivery and assessment for this unit, centres may consider alignment with the Apprenticeship Standard.

Apprentices must be given a clear assessment brief before the assessment takes place, detailing:

- the assessment activity and context
- the learning outcome(s) to be assessed
- the criteria they are expected to meet
- the time and duration of the assessment.

Wherever possible, centres should adopt a holistic and integrated approach to assessing the skills-based units in the qualification. This gives the assessment process greater rigour, minimises repetition and saves time. The focus should be on assessment activities generated through naturally occurring evidence in the workplace, rather than on specific tasks. Taken as a whole, the evidence must show that the apprentice meets all learning outcomes and assessment criteria over a period of time. It should be clear in the assessment records where each learning outcome and assessment criterion has been covered and achieved.

Please refer to the guidance on selecting suitable assessment activities for the skills-based units, available on our website.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcomes 5, 6 and 7 must be assessed in a real work environment by the assessor. Learning outcomes 1, 2, 3 and 4 must be achieved prior to learning outcomes 5, 6 and 7. There should be a minimum of three holistic observations over a period of time. One observation must include the dispensed and self-check, and two observations should include the check of others.

Learning outcomes 6 and 7:

Evidence must be provided to show that apprentices can assemble prescribed items correctly and that they are able to check prescribed items that have been assembled by others. It is not acceptable for apprentices to provide evidence of checking prescribed items that they have assembled themselves.

For learning outcomes 5, 6, 7:

A minimum number of 500 items must be dispensed accurately with no errors being made and self-checked consistently over a period of time in a range of circumstances, with an additional minimum number of 500 accurately checked items for checks of others.

Checking of others can only be completed after the successful completion of dispensed and self-check.

A formative competence assessment log must be completed that can be used in the overall portfolio for the qualification.

The following units must be achieved before undertaking this unit:

- *Unit 16: Actions and Uses of Medicines*
- *Unit 1: Principles of Person-Centred Approaches for Pharmacy Technicians.*

Individual refers to someone requiring advice or support; it will usually mean the person or people supported by the apprentice.

Others may include:

- team members and colleagues
- other professionals
- individual people who require advice or support
- families, friends, advocates or others who are important to individual people.

Learning outcome 1: Understand governance requirements for assembling and checking dispensed medicines and products

Learning outcome 1 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be a pocket guide for new staff members that outlines legislation, Standard Operating Procedures and current guidelines relevant to the assembling and checking of dispensed items and the importance of adhering to them. The pocket guide will need to include details of when and why Patient Medication Records are used. (This could be linked to the assignment for *Unit 7: Undertake Medicines Reconciliation and Supply*, learning outcome 1.)

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   briefly set out the legislation that applies to assembling and checking dispensed medicines and products (AC1.1)

2   briefly set out the Standard Operating Procedures relating to assembling and checking dispensed medicines and products (AC1.2)

3   give reasons why it is important to follow Standard Operating Procedures when assembling and checking dispensed medicines and products, using examples to support the points made (AC1.3)

4   give a clear account of when and why Patient Medication Records (PMRs) are used, using their own words and including all the relevant information (AC1.4)

5   provide details of the current guidelines that apply when assembling and checking dispensed medicines and products, giving reasons and examples (AC1.5).

Learning outcome 2: Understand processes for assembling dispensed items

Learning outcome 2 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be writing a Standard Operating Procedure for the stages of the dispensing process. This will need to include details of:

- the principles of a clinical screen and how to confirm that this has been completed

- different prescribers, the prescription types they use, and the range of medicines and products allowed on each

- precautions relating to the assembly of dispensed items, including factors causing deterioration of stock

- selecting the correct equipment for safe handling and use

- processes for reconstitution

- the importance of storage conditions and expiry dates

- the importance of supplying relevant items

- the importance of recording, retrieving and storing all required information.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of the stages of the dispensing procedure using their own words and including all the relevant information (AC2.1)

2 give a clear account of the principles of a clinical screen, using their own words and including all the relevant information (AC2.2)

3 provide details of how to confirm a clinical screen has been completed, giving reasons and examples (AC2.3)

4 provide details of the precautions for assembling dispensed items, giving reasons and examples to support the points made (AC2.4)

5 give a clear account of the factors that can cause deterioration of stock, using their own words and including all the relevant information (AC2.5).

6 provide details of who can legally prescribe and the different formats for prescriptions, giving reasons and examples to support the points made (AC2.6)

7 give details of the different types of prescription form and the range of medicines and products that may be dispensed on each, giving reasons and examples to support the points made (AC2.7)

8   give reasons why it is important to select the correct equipment for safe handling and use, using examples to support the points made (AC2.8)

9   give a clear account of the processes for reconstitution, using their own words and including all the relevant information (AC2.9)

10 give reasons why storage conditions and expiry dates are important, using examples to support the points made (AC2.10)

11 give reasons why it is important to supply relevant items, using examples to support the points made (AC2.11)

12 give reasons why it is important to record, store and retrieve information in accordance with organisational procedures, using examples to support the points made (AC2.12).

Learning outcome 3: Understand processes for packing and labelling prescribed items

Learning outcome 3 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be a selection of sample prescriptions for a variety of medicines/products. Apprentices will need to explain their choice of container and give examples of labels, with detailed explanations of legal requirements for each medicine/product. Sample prescriptions will need to be endorsed appropriately and the required recording and documentation will need to be completed and explained.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the use of **at least six** different container types and closures, giving reasons and examples to support the points made (AC3.1)

2   provide details of the legal requirements for labelling medicines and products and prescribing conventions, giving reasons and examples to support the points made (AC3.2)

3   give reasons for annotating or endorsing prescriptions, using examples to support the points made (AC3.3)

4   provide details of records and documentation that need to be completed as part of the dispensing process, giving reasons and examples to support the points made (AC3.4).

Learning outcome 4: Understand processes for preventing and dealing with dispensing errors and near misses

Learning outcome 4 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be a reflective account of an error the apprentice has made while dispensing. The apprentice will need to reflect on the causes of this error and its consequences for all parties involved, and will also need to give details of how the error was rectified. They will need to explain how errors/near misses are recorded, why this is important and how this information is used and communicated. This account should show how they have reflected on the error and how they will prevent errors from occurring in future.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of the causes and consequences of near misses and dispensing errors, using their own words and including all the relevant information (AC4.1)

2 provide details of how dispensing errors can be rectified, giving reasons and examples to support the points made (AC4.2)

3 give reasons why error reporting is important and how this impacts on practice, using examples to support the points made (AC4.3)

4 give a clear account of the procedures for communicating and documenting dispensing errors and near misses, using their own words and including all the relevant information (AC4.4)

5 provide details of methods for preventing dispensing errors, giving reasons and examples to support the points made (AC4.5)

6 provide details of how to use dispensing errors or near misses as an opportunity to reflect on future practice, giving reasons and examples to support the points made (AC4.6).

Learning outcomes 5, 6 and 7 assess skills. The primary method of assessment for these learning outcomes is observation in the workplace by the assessor.

Across the qualification's skills-based units there must be at least three observations that cover the required skills. Evidence should be generated over a period of time to show consistent performance. Expert witness testimony may be used where it is difficult for an assessor to observe aspects of practice. Expert witness testimony is NOT a substitute for the requirement of the three observations by the assessor across the qualification.

Textbooks

British National Formulary (Pharmaceutical Press, current edition)

British National Formulary for Children (Pharmaceutical Press, current edition)

Royal Pharmaceutical Society – *Medicines, Ethics and Practice*
(Pharmaceutical Press, current edition, published annually in July)

Wingfield J, Pitchford K – *Dale and Appelbe's Pharmacy and Medicines Law*,
11th edition (Pharmaceutical Press, 2017) ISBN 9780857112026

Websites

www.aptuk.org	Association of Pharmacy Technicians UK
www.cppe.ac.uk	Centre for Pharmacy Postgraduate Education
www.doh.gov.uk	Department of Health and Social Care
www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency	Medicines and Healthcare Products Regulatory Agency
www.legislation.gov.uk	The National Archives
www.medicinescomplete.com	Medicines Complete
www.nice.org.uk	National Institute for Health and Care Excellence
www.pharmacyregulation.org	General Pharmaceutical Council
www.rpharms.com	Royal Pharmaceutical Society
www.who.int	World Health Organisation

Apps (available on Apple and Android)

BNF	British National Formulary
BNFC	British National Formulary for Children

Unit 9: Receive, Validate and Issue Prescriptions

Level:	3
Credit value:	10
Guided Learning Hours:	40

Unit summary

The aim of this unit is to give apprentices the technical skills and knowledge needed to effectively validate and issue prescriptions presented at the pharmacy. The unit includes providing advice and information to individuals on their medications at the point of issuing the prescription.

In this unit, you will develop your understanding of the legislation and Standard Operating Procedures that govern receiving, validating and issuing prescriptions. You will then have the opportunity to demonstrate skills in receiving, validating and issuing prescriptions, following all the required processes to successfully complete these activities. You will explore the different types of prescription in use by a range of prescribers and how prescriptions are charged.

Accuracy and adherence to procedures are central to your work as a Pharmacy Technician. You will complete important checks relating to receiving, validating and issuing prescriptions, particularly with regard to safety and potential adverse drug reactions or interactions. You will also check that prescriptions are genuine and carry all the correct information.

This unit gives you the opportunity to demonstrate skills in interacting positively with individuals, using questioning and listening skills effectively to guide them through the required procedures. You will provide information and advice, ensuring that this meets individual needs.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand governance requirements for receiving, validating and issuing prescriptions	1.1	Describe **legislation** that relates to the following: • receiving prescriptions • validating prescriptions • issuing prescriptions	**Legislation** to include as a minimum: legal requirements relevant to receiving, validating and issuing prescriptions; the role of others in the organisation; prescription charges and exemptions; confidentiality; information governance; The NHS Act 2006
		1.2	Explain the importance of following **Standard Operating Procedures** when: • receiving prescriptions • validating prescriptions • issuing prescriptions	**Standard Operating Procedures**: the importance of working within the limits of own competence and authority, when to seek agreement or permission from others and when to refer on to an appropriate person

Learning outcomes		Assessment criteria		Content
2	Be able to receive prescriptions	2.1	Explain the purpose of different types of prescriptions and when they are used	**Individual's details**: name, address, date of birth **Patient declaration**: on the prescription form **Adverse drug reactions or interactions**: an unwanted or harmful reaction experienced following the administration of a drug or combination of drugs under normal conditions of use and is suspected to be related to the drug. An ADR will usually require the drug to be discontinued or the dose reduced **Additional needs may include**: manual dexterity, disability, e.g. sight impairment, language barriers, swallowing difficulty
		2.2	Check that the **individual's details** are complete	
		2.3	Check that the **patient declaration** has been completed in line with current legislation	
		2.4	Explain prescription charge requirements in line with national guidelines	
		2.5	Determine whether the individual has any **adverse drug reactions or interactions** and take appropriate action	
		2.6	Confirm whether the individual has any **additional needs or requirements** to support optimal use of their medicines	
		2.7	Refer any identified issues to an appropriate healthcare professional	

Learning outcomes		Assessment criteria		Content
3	Be able to validate prescriptions	3.1	Describe how **reference sources** are used in validating prescriptions	**Reference sources**: British National Formulary (BNF); local formularies; drug tariff; Standard Operating Procedures; National Institute for Health and Care Excellence (NICE) guidelines
		3.2	Explain how to check for **forged prescriptions**	**Forged prescriptions**: colour of the prescription form; serial numbers; date of issue; address of prescriber; alterations or additions; signature
		3.3	Explain the **appropriate action** to take if prescriptions are invalid or forged	**Appropriate action** may include: not dispensing the item; checking with the prescriber; calling the police; informing the relevant organisation (e.g. NHS England); recording the information
		3.4	Confirm the prescription meets **legal requirements**	**Legal requirements** to include: who can legally prescribe; types of form used by different prescribers; details required on a prescription
		3.5	**Assess prescriptions** to confirm items have been **prescribed as intended** for the individual	**Assess prescriptions** may include the following: interpret prescribing conventions, abbreviations and medical terminology; interpret the use of common proprietary and generic names within your scope of practice
				Continued on next page

Learning outcomes		Assessment criteria		Content
				Prescribed as intended take into account: how medicines are administered, their use and the effect they have on basic human physiology; different strengths, forms, doses and quantities of medicines and why they are used; the actions and use of drugs including different drug interactions and contra-indications
4	Be able to issue prescribed items	4.1	Explain the importance of ensuring the prescribed item is issued for the correct individual	**Checks and actions prior to issuing prescribed items** must include: confirming the individual's identity and that it correctly matches with the prescription; identifying if the individual has previously used the prescribed item; establishing whether the individual is taking any other medication either prescribed or non-prescription and take the appropriate action; determining whether the individual has any allergies and take appropriate action; confirming the prescribed item(s) or products match the prescription and are what the individual is expecting; referring the individual to an appropriate person if necessary, providing all the relevant information
		4.2	Explain the importance of providing correct information to individuals	
		4.3	Describe the limits of the role of the Pharmacy Technician in relation to issuing prescribed items	
		4.4	Perform **checks and actions prior to issuing prescribed items**	
		4.5	Establish the details of any history of **adverse drug reactions or interactions** and take the appropriate action where this is out of scope of own practice	

Learning outcomes	Assessment criteria		Content
	4.6	Provide **advice and information** to the individual in a format which meets their needs	*Continued from previous page*
			Adverse drug reactions or interactions: an unwanted or harmful reaction experienced following the administration of a drug or combination of drugs under normal conditions of use and is suspected to be related to the drug
	4.7	Provide all the necessary sundry items and information leaflets	
	4.8	Issue the medicine(s) and/or product(s) in accordance with Standard Operating Procedures	An ADR will usually require the drug to be discontinued or the dose reduced
	4.9	Confirm the individual's understanding of any **advice and information** given	**Advice and information including**: how medicines are administered, used and the effect they have on human physiology; actions and use of prescribed items including different interactions and contra-indications; psychological, occupational and social aspects and implications for individuals living with conditions; discussing relevant information with the individual to ensure the prescribed items are used and stored correctly
	4.10	Identify when the individual needs further **advice and information** and refer to the appropriate person	
	4.11	Complete all relevant documentation relating to the validating and issuing of prescriptions in line with **legal and organisational requirements**	**Legal and organisational requirements** including: current legislation relating to receiving and validating prescriptions; Standard Operating Procedures; General Pharmaceutical Council (GPhC) standards and guidance

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this unit will require access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors. Standard Operating Procedures should be in place for all tasks required in this unit and all health and safety requirements must be in place.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have current experience of pharmacy practice, and show evidence of continuing professional development, in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

This unit is expected to be assessed in the real working environment where the evidence is naturally occurring and is collected over a period of time. Further details are given later in this section.

Centres are responsible for deciding on the assessment activities that will enable apprentices to produce valid, sufficient, authentic and appropriate evidence to meet the assessment criteria. When planning delivery and assessment for this unit, centres may consider alignment with the Apprenticeship Standard.

Apprentices must be given a clear assessment brief before the assessment takes place, detailing:

- the assessment activity and context
- the learning outcome(s) to be assessed
- the criteria they are expected to meet
- the time and duration of the assessment.

Wherever possible, centres should adopt a holistic and integrated approach to assessing the skills-based units in the qualification. This gives the assessment process greater rigour, minimises repetition and saves time. The focus should be on assessment activities generated through naturally occurring evidence in the workplace, rather than on specific tasks. Taken as a whole, the evidence must show that the apprentice meets all learning outcomes and assessment criteria over a period of time. It should be clear in the assessment records where each learning outcome and assessment criterion has been covered and achieved.

Please refer to the guidance on selecting suitable assessment activities for the skills-based units, available on our website.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcomes 2, 3, and 4 must be assessed in a real work environment by the assessor. For learning outcomes 2, 3 and 4, simulation may be permitted if the apprentice is unable to generate evidence through normal work activity.

The following units must be achieved before undertaking this unit:

- *Unit 16: Actions and Uses of Medicines*
- *Unit 1: Principles of Person-Centred Approaches for Pharmacy Technicians.*

Learning outcome 1: Understand governance requirements for receiving, validating and issuing prescriptions

Learning outcome 1 assesses knowledge, so written evidence from the apprentice will be needed.

An example of a suitable assignment to cover this learning outcome could be a poster to be displayed in a work area, showing staff how Standard Operating Procedures are followed for receiving, validating and issuing prescriptions. The poster should incorporate the legal requirements associated with each of these activities.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account in their own words of **at least four** pieces of legislation relating to each of the following: receiving prescriptions; validating prescriptions; issuing prescriptions (AC1.1)

2   provide details of the importance of following Standard Operating Procedures for each of the following activities: receiving prescriptions; validating prescriptions; issuing prescriptions. Apprentices will need to give reasons and examples to support the points made (AC1.2).

Learning outcomes 2, 3 and 4 assess skills. The primary method of assessment for these learning outcomes is observation in the workplace by the assessor.

Across the qualification's skills-based units there must be at least three observations that cover the required skills. Evidence should be generated over a period of time to show consistent performance. Expert witness testimony may be used where it is difficult for an assessor to observe aspects of practice. Expert witness testimony is NOT a substitute for the requirement of the three observations by the assessor across the qualification.

Textbooks

British National Formulary (Pharmaceutical Press, current edition)

British National Formulary for Children (Pharmaceutical Press, current edition)

Royal Pharmaceutical Society – *Medicines, Ethics and Practice* (Pharmaceutical Press, current edition, published annually in July)

Wingfield J, Pitchford K – *Dale and Appelbe's Pharmacy and Medicines Law*, 11th edition (Pharmaceutical Press, 2017) ISBN 9780857112026

Websites

www.aptuk.org	Association of Pharmacy Technicians UK
www.cppe.ac.uk	Centre for Pharmacy Postgraduate Education
www.doh.gov.uk	Department of Health and Social Care
www.gov.uk/government/ organisations/medicines-and-healthcare-products-regulatory-agency	Medicines and Healthcare Products Regulatory Agency
www.legislation.gov.uk	The National Archives
www.medicinescomplete.com	Medicines Complete
www.nice.org.uk	National Institute for Health and Care Excellence
www.pharmacyregulation.org	General Pharmaceutical Council
www.rpharms.com	Royal Pharmaceutical Society
www.who.int	World Health Organisation

Apps (available on Apple and Android)

BNF	British National Formulary
BNFC	British National Formulary for Children

Unit 10: Chemical Principles for Pharmacy Technicians

Level: 3

Credit value: 3

Guided Learning Hours: 20

Unit summary

The aim of this unit is to give pre-registration trainee Pharmacy Technicians underpinning knowledge of the fundamental principles of chemistry for application to pharmaceutical concepts.

You will learn about the structure of atoms and how their electronic configuration allows elements to be classified according to their chemical properties using the periodic table. You will learn how and why atoms and molecules interact to form chemical bonds, how compounds can be represented using different chemical formulae and how their interaction produces compounds of particular chemical and physical properties, which are essential to the formulation of pharmaceutical products. You will learn how both chemical and physical factors affect rates of reactions in different pharmaceutical preparations, as well as how pH can affect the formulation of pharmaceutical products. You will learn about the biological importance of water in the body, along with how and why different types of water are used in the manufacture of pharmaceutical products.

This knowledge and understanding will underpin your work as a Pharmacy Technician.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the principles behind the periodic table and bonding	1.1	Explain the **atomic structure** of **elements** in the periodic table	**Atomic structure**: protons, neutrons, electrons, basic arrangement of electrons around the nucleus, atomic number, mass number, isotopes
		1.2	Describe **inter** and **intra** molecular forces of attraction	**Elements**: the first 20, position in the periodic table, grouping, reaction trends
		1.3	Describe chemical bonding between atoms	**Inter**: Van der Waals forces, dipole-dipole forces, hydrogen bonding
		1.4	Describe chemical bonding between molecules	**Intra**: covalent, Ionic

Learning outcomes		Assessment criteria		Content
2	Understand the principles behind chemical reactions in pharmaceutics	2.1	Describe how **chemical and physical factors** affect the rates of reactions	**Chemical and physical factors**: changes in concentration, temperature, pressure, surface area, catalysts
		2.2	Explain how the principles of **pH** are applied to pharmaceuticals	**pH**: pH scale, pharmaceutical examples of acids and bases, pH buffer
		2.3	Explain the concept of **chemical formulae**	**Chemical formulae**: structural formulae, displayed formulae, isomers, pharmaceutical formulae
		2.4	Explain how the **chemical and physical properties** of different forms of pharmaceutical products affect formulation	**Chemical and physical properties**: solubility; solute; solvent; saturated; super saturated; isotonicity; factors affecting rate of solution; characteristics of emulsions, characteristics of suspensions; solid dose forms; chemical and physical purity of raw materials; quality standards applied to materials; contamination of raw materials

Learning outcomes		Assessment criteria		Content
3	Understand the importance of water in pharmaceutical products	3.1	Explain the molecular structure of **water**	**Water**: molecular structure, interactions between molecules
		3.2	Describe the **special characteristics** of water resulting from hydrogen bonding	**Special characteristics**: high melting point, boiling point, density of ice compared to water
		3.3	Explain the biological **importance** of water	**Importance**: biological solvent, transport medium, lubricant, moderation of temperature, metabolite
		3.4	Explain why pharmaceutical products require different **types of water** in their manufacture	**Types of water**: potable, distilled, de-ionised, purified, water for preparations, water for injections, sterile water, pyrogen free

Essential information for tutors and assessors

Essential resources

Ideally, apprentices should have access to a laboratory equipped with standard laboratory equipment and reactants enabling them to carry out a range of experiments investigating aspects of the unit content. Where this is not possible, the use of technology to allow apprentices to experience laboratory experiments, for example through videos or Skype®, or ready-prepared packs of experiments sent to the apprentice's workplace are acceptable alternatives.

A library allowing apprentices to access online and/or print journals, GCSE and GCE A Level standard chemistry textbooks and relevant electronic resources would also be ideal, but, where this is not possible, technology could be used to give apprentices access to an acceptable range of learning resources.

If this unit is delivered by a tutor with chemistry rather than pharmaceutical expertise, it will be important to provide specific pharmaceutical input regarding the significance of the seven types of pharmaceutical water, and how they are made, used and tested.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcome 1: Understand the principles behind the periodic table and bonding

An example of a suitable assignment to cover this learning outcome could be a portfolio of work including the following: a poster demonstrating the link between atomic structure, electronic configuration of elements and the arrangement of the periodic table; and a presentation or report on attraction and bonding within and between atoms and molecules to form chemical compounds.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the atomic structure of **at least eight** elements in the periodic table (**at least one** from each group in the periodic table) (AC1.1)

2   give a clear account of inter and intra molecular forces of attraction, using their own words and including all the relevant information (AC1.2)

3   give a clear account of chemical bonding between atoms, using their own words and including all the relevant information (AC1.3)

4   give a clear account of chemical bonding between molecules, using their own words and including all the relevant information (AC1.4).

Learning outcome 2: Understand the principles behind chemical reactions in pharmaceutics

An example of a suitable assignment to cover this learning outcome could be laboratory reports describing the effect of chemical and physical factors on the rates of chemical reactions, along with a summary report detailing the impact of these factors and pH on the formulation of different pharmaceutical products in terms of preparation, storage and administration. Apprentices will need to demonstrate a range of representations of the formulae of chemical compounds involved.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of how chemical and physical factors affect the rates of reactions, using their own words and including all the relevant information (AC2.1)

2   provide details of how the principles of pH are applied to pharmaceuticals, giving reasons and examples to support the points made (AC2.2)

3   provide details of the concept of chemical formulae, giving reasons and examples to support the points made (AC2.3)

4   provide details of how the chemical and physical properties of different forms of pharmaceutical products affect formulation, giving reasons and examples to support the points made (AC2.4).

Learning outcome 3: Understand the importance of water in pharmaceutical products

An example of a suitable assignment to cover this learning outcome could be an information leaflet that outlines the biological importance of water and the uses of seven different types of water in the manufacturing of pharmaceutical products. The leaflet must include the special characteristics of water related to its molecular bonding and structure, linked to the functions it carries out in the human body.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the molecular structure of water (AC3.1)

2   give a clear account of the special characteristics of water resulting from hydrogen bonding, using their own words and including all the relevant information (AC3.2)

3   provide details of the biological importance of water, giving reasons and examples to support the points made (AC3.3)

4   give reasons why pharmaceutical products require different types of water in their manufacture, using examples to support the points made. The explanation needs to include **at least seven** types of water (AC3.4).

Textbooks

Petrucci R et al – *General Chemistry: Principles and Modern Applications*, 11th edition (Pearson, 2016) ISBN 9780132931281

Ryan L – *GCSE Chemistry for You*, 5th edition (Oxford University Press, 2016) ISBN 9780198375760

Sutton R et al – *Chemistry for the Life Sciences*, 2nd edition (CRC Press, 2008) ISBN 9781420069358

Journals

Chemistry Review (Hodder Education)

Journal of Pharmacy Technology (Sage)

New Scientist (New Scientist Ltd)

Websites

www.chemguide.co.uk	Guide to chemical concepts and terminology
www.rsc.org/learn-chemistry/	Resources from the Royal Society of Chemistry for chemical concepts and practical investigations
www.creative-chemistry.org.uk/	Teaching and learning resources for chemistry

Unit 11: Biological Principles for Pharmacy Technicians

Level: 3

Credit value: 4

Guided Learning Hours: 25

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of the structure and function of biological building blocks that are relevant to pharmacy.

You will learn about carbohydrates, lipids and proteins and how they are used by the human body. You will learn about enzymes and coenzymes and their action. You will also explore elements of the human genome, including the expression of proteins from nucleic acids. You will also learn how genetic material is inherited and how mutations can be caused, leading to variation in cells and tissues. This knowledge and understanding will underpin your work as a Pharmacy Technician.

It is recommended that apprentices do not attempt this unit until they have completed the first learning outcome from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions*. Learning outcome 1 from Unit 14 ('Understand different types of human cells and tissue') provides a basis for much of the knowledge and understanding in this unit.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the structure and function of carbohydrates and lipids	1.1	Describe the **structure** of carbohydrates	**Carbohydrate structure**: forms of mono-, di- and polysaccharides (simple ring, straight chain) formation and breakdown of glycosidic bonds, anabolism and catabolism

Carbohydrate function: energy source, storage, role in digestive health, respiration

Lipid structure: saturated, unsaturated fatty acids, triglycerides, phospholipids

Lipid function: energy sources, structural tissue components, insulation, physical protection |
		1.2	Explain the **function** of carbohydrates	
		1.3	Describe the **structure** of lipids	
		1.4	Explain the **function** of lipids	
2	Understand the structure and function of proteins	2.1	Describe the **structure** of proteins	**Structure**: essential and non-essential amino acids, formation of peptide bonds, formation of dipeptides and polypeptide chains (primary structure), basic secondary, tertiary and quaternary
		2.2	Explain how proteins aid growth and repair	

Learning outcomes		Assessment criteria		Content
3	Understand the structure and function of enzymes	3.1	Describe the **structure** of enzymes	**Structure**: shape, active sites, simple lock and key, induced fit
		3.2	Explain the **function** of enzymes	**Function**: catalyst, inhibitor, activator
		3.3	Describe the **actions** of enzymes and coenzymes	**Actions**: hypothesis of enzyme action, simple lock and key, properties of specificity, relevance of optimum conditions on rate of activity, causes and effects of denaturation
4	Understand the structure and function of the human genome	4.1	Describe the **human genome**	**Human genome**: amount of base pairs, genes, chromosomes, types of deoxyribonucleic acid (DNA)
		4.2	Explain the **structure** of DNA and RNA	**Structure**: DNA and ribonucleic acids (RNA), including complementary base pairing, arrangement of genetic material and gene transmission in eukaryotic and bacterial cells
		4.3	Explain the **function** of nucleic acids	
		4.4	Describe the **causes** and **effects** of base sequence mutations on genetic variation and the functions of cells and tissues	**Function**: storage and transmission of genetic information, role of DNA and RNAs in protein synthesis through transcription and translation
				Causes: evolution, chemical, radiation
				Effects: of beneficial, neutral and harmful base sequence mutations, missense, nonsense, insertion, deletion, frameshift, duplication, repeat expansions

Essential information for tutors and assessors

Essential resources

Apprentices will need access to a library with a range of relevant books, journals and electronic resources, including a range of general AS/A2 biology and human biology books.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcome 1: Understand the structure and function of carbohydrates and lipids

Learning outcome 2: Understand the structure and function of proteins

An example of a suitable assignment to cover these learning outcomes could be presentation slides, with supporting speaker notes, entitled 'Carbohydrates, Lipids and Proteins', focusing on the essential nutrients required to maintain a positive lifestyle. The presentation would need to cover the structure of carbohydrates, lipids and proteins and how they are used in the human body. Apprentices would not be required to deliver the presentation.

To satisfy the assessment criteria for these learning outcomes, apprentices will:

1   give a clear account of the structure of carbohydrates, using images and the apprentice's own words (AC1.1)

2   provide details of the function of carbohydrates, giving **at least three** examples of how carbohydrates are used by the human body (AC1.2)

3   give a clear account of the structure of lipids, using images and their own words (AC1.3).

4   provide details of the function of lipids, giving **at least three** examples of how lipids are used by the human body (AC1.4)

5   give a clear account of the structure of proteins, using images and their own words (AC2.1)

6   provide details of how proteins are aid growth and repair in the human body, giving reasons and examples to support the points made (AC2.2).

Learning outcome 3: Understand the structure and function of enzymes

An example of a suitable assignment to cover this learning outcome could be a report on enzymes that shows the effects of changing conditions on the rate of enzyme activity, such as temperature, pH and concentration of enzyme/substrate. The report would need to cover the structure, function and actions of enzymes and how coenzymes affect enzyme action.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the structure of enzymes, using images and their own words (AC3.1)

2   provide details of the function of enzymes, giving reasons and examples to support the points made (AC3.2)

3   give a clear account of the actions of enzymes and coenzymes, showing how this information is applied in a practical context (AC3.3).

Learning outcome 4: Understand the structure and function of the human genome

An example of a suitable assignment to cover this learning outcome could be a report on the human genome and gene transmission in eukaryotic and bacterial cells. The report would need to cover the nature of the human genome and the central dogma of protein synthesis, including the structure and function of DNA and types of RNA along with the causes and effects of different types of base sequence mutation.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the human genome, using images (AC4.1)

2   provide details of the structure of DNA and RNA, giving reasons and examples to support the points made (AC4.2)

3   provide details of the function of nucleic acids, giving reasons and examples to support the points made (AC4.3)

4   give a clear account of **three** causes and **three** effects of base sequence mutations on genetic variation and the functions of cells and tissues. Apprentices will need to outline the three effects with reasoning and examples relevant to genetic variation and disease (AC4.3).

Textbooks

Hames D, Hooper N – *Instant Notes in Biochemistry*, 4th edition (Routledge, 2011)
ISBN 9780415608459

Hillis D et al – *Life: The Science of Biology,* 11th edition (W H Freeman, 2017)
ISBN 9781319010164

Kent M – *Advanced Biology*, 2nd edition (Oxford University Press, 2013)
ISBN 9780198392903

Reed R et al – *Practical Skills in Biology*, 6th edition (Pearson, 2016)
ISBN 9781292094328

Reed, R et al – *Practical Skills in Biomolecular Science*, 5th edition (Pearson, 2016)
ISBN 9781292100739

Waugh A and Grant, A – *Ross & Wilson Anatomy and Physiology in Health and Illness*,
13th edition (Elsevier, 2018) ISBN 9780702072765

Journal

Biological Sciences Review (Hodder Education)

Websites

bigpictureeducation.com/	Wellcome Trust post-16 biology teaching and learning resources
www.khanacademy.org/science/biology	Biology tutorials and resources
learn.genetics.utah.edu/	Interactive teaching and learning resources for genetics

Unit 12: Medicinal and Non–medicinal Treatments for Gastrointestinal and Nutritional Conditions

Level: 3

Credit value: 5

Guided Learning Hours: 35

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of the gastrointestinal system and learn about the main medicines, supplements and treatments of related conditions. Apprentices will understand how to advise individuals on the effective management and treatment of associated conditions.

In this unit, you will explore the structure and function of the digestive system, including how enzymes act within the digestive system. You will learn about medical conditions affecting the digestive system, for example dyspepsia and peptic ulceration, and how common medicines are used to treat gastrointestinal conditions, including potential side effects. You will also learn about conditions resulting from nutritional issues, medicinal treatments for these conditions and potential side effects, and routes for the administration of artificial nutrition.

This unit gives you the opportunity to learn about available resources, for example the British National Formulary (BNF), which can be used to obtain relevant information on medical conditions, appropriate treatments and potential side effects. This will enable you to counsel patients on the safe use of their medicines to manage their conditions effectively.

It is recommended that apprentices do not attempt this unit until they have completed the first learning outcome from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions*. Learning outcome 1 from Unit 14 ('Understand different types of human cells and tissue') provides a basis for much of the knowledge and understanding in this unit.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the digestive system	1.1	Describe the **structure** of the digestive system	**Digestive system structure**: mouth, pharynx, oesophagus, stomach, pancreas, liver, gall bladder, small intestine, large intestine, rectum, anus
		1.2	Explain how the structure of the digestive system relates to its **function**	**Digestive system function**: the physiology and pathology relating to the elimination of waste products from the body
		1.3	Explain how **enzymes** function within the digestive system	**Enzymes**: break down and absorption into the body of nutrients

Learning outcomes		Assessment criteria		Content
2	Understand how medicines are used in the treatment of conditions of the gastrointestinal tract	2.1	Describe different **conditions** affecting the gastrointestinal tract	**Conditions**: dyspepsia, peptic ulceration, diarrhoea, constipation, nausea and vomiting, haemorrhoids, gastro-oesophageal reflux disease (GORD), inflammatory bowel disease
		2.2	Explain how **common medicines** are used in the treatment of gastrointestinal tract conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and treatments, including agents and their actions, benefits and limitations, and contraindications for the conditions listed
		2.3	Explain the reasons why **common side effects** may occur with medicines used to treat gastrointestinal tract conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) and other reliable sources for common side effects of medicines for the conditions listed

Learning outcomes		Assessment criteria		Content
3	Understand how medicines and supplements are used in the treatment of nutritional conditions	3.1	Describe different **nutritional conditions**	**Nutritional conditions**: coeliac disease, metabolic conditions, vitamin, mineral and electrolyte deficiencies/imbalances, eating disorders, obesity, food intolerances, iron deficiency anaemia, pernicious anaemia
		3.2	**Compare** the **routes** used to provide artificial nutrition	**Compare**: reasons for use, problems, methods, potential complications
		3.3	Explain how **common medicines and supplements** are used for nutritional conditions	**Routes**: intravenous nutrition, central line and peripheral line, enteral nutrition including Percutaneous Endoscopic Gastrostomy (PEGs)
		3.4	Explain the reasons why **common side effects** may occur with medicines used to treat nutritional conditions	**Common medicines and supplements**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and supplements, including agents and their actions, benefits and limitations, and contraindications for the conditions listed
				Common side effects: refer to current edition of British National Formulary (BNF) and other reliable sources for common side effects of medicines for the conditions listed

Learning outcomes		Assessment criteria		Content
4	Understand the advice individuals need to manage their **condition**	4.1	Explain the **information** that must be given to **individuals** about their **medicines**	**Condition**: gastrointestinal; nutritional

Information: dosage, frequency, storage, care, non-compliance, relevant contraindications and any other appropriate information (e.g. take medicine with food, diet)

Management of their conditions: treatment pathways, self-care, self-monitoring, signposting to information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines, changes to lifestyle |
| | | 4.2 | Explain the information that must be given to individuals about the **management of their condition** | |

Essential information for tutors and assessors

Essential resources

Facilities required for this unit include apprentices having access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and show evidence of contact with the profession and continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources, for example *Medicines Complete* and the *electronic Medicines Compendium (eMC)*. There may be online library resources available through the apprentices' education provider. A current medical dictionary (nursing level is suitable) will be required.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Apprentices are required to cover all the content **and**:

- for AC2.1 apprentices **must** describe gastro-oesophageal reflux disease (GORD) and inflammatory bowel disease

- for AC3.1 apprentices **must** describe electrolyte deficiencies/imbalances, eating disorders, obesity and food intolerances, iron deficiency anaemia and pernicious anaemia.

Learning outcome 1: Understand the digestive system

An example of a suitable assignment to cover this learning outcome could be presentation slides with supporting speaker notes entitled 'The Digestive System and its Functions'. The presentation would need to cover the structure and function of the digestive system system and an explanation of how enzymes function within the digestive system. The presentation would need to show how the digestive system processes food, breaks it down, absorbs what is necessary for life and then eliminates waste. Apprentices should show awareness of how this process of metabolism relates to medicines as well as to foods, and how it also involves the liver, pancreas and gall bladder, which are related organs. Apprentices would not be required to deliver the presentation but the presentation should be designed to be delivered to fellow pharmacy professionals.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the structure of the digestive system, using their own words and including all the relevant information (AC1.1)

2   provide details of how the structure of the digestive system relates to its function, using reasons and examples to support the points made (AC1.2)

3   provide details of how enzymes function within the digestive system, using reasons and examples to support the points made (AC1.3).

Learning outcome 2: Understand how medicines are used in the treatment of conditions of the gastrointestinal tract

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet on conditions of the gastrointestinal tract. The information provided would need to include common medicines used to treat the apprentice's chosen gastrointestinal tract conditions and, for each of the medicines, side effects that may be experienced by the patient. The patient information leaflet should consist of no more than two sides of A4 and should include signposting information for patients with gastrointestinal conditions.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of **at least five** different conditions affecting the gastrointestinal tract, using their own words and including all the relevant information. The conditions described must include gastro-oesophageal reflux disease (GORD) and inflammatory bowel disease (AC2.1)

2   provide details of how common medicines are used in the treatment of **at least five** gastrointestinal tract conditions (which need to be the same conditions described for AC2.1), giving reasons, examples and/or evidence to support the points made (AC2.2)

3   give reasons why common side effects may occur with medicines used to treat gastrointestinal tract conditions (which need to be the same medicines explained for AC2.2), referring to examples and/or evidence to support the points made (AC2.3).

Learning outcome 3: Understand how medicines and supplements are used in the treatment of nutritional conditions

An example of a suitable assignment to cover this learning outcome could be a report on nutritional conditions. The report would need to include a description of the apprentice's chosen nutritional conditions. It should show the apprentice's understanding of administration routes for artificial nutrition and identify the advantages and disadvantages of using the chosen routes. Apprentices should compare each of these routes with the oral route. Apprentices should include details of medicines and supplements linked to their chosen nutritional conditions, including common side effects of medicines used to treat the nutritional conditions. Apprentices could also address the first pass effect and its impact on the metabolism of drugs.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of **at least six** different nutritional conditions, using their own words and including all the relevant information. The conditions described must include electrolyte deficiencies/imbalances, eating disorders, obesity, food intolerances, iron deficiency anaemia and pernicious anaemia (AC3.1)

2   explain the similarities and differences between the routes used to provide artificial nutrition, highlighting the advantages and disadvantages of each (AC3.2)

3   provide details of how common medicines and supplements are used for **at least six** nutritional conditions (which need to be the same conditions described for AC3.1), giving reasons, examples and/or evidence to support the points made (AC3.3).

4   give reasons why common side effects may occur with medicines used to treat nutritional conditions (which need to be the same medicines explained for AC3.3), referring to examples and/or evidence to support the points made (AC3.4).

Learning outcome 4: Understand the advice individuals need to manage their condition

An example of a suitable assignment to cover this learning outcome could be an explanatory leaflet to be used in the workplace to support the provision of information to patients about their conditions. The explanatory leaflet would need to cover treatment pathways and self-care advice for patients, as well as signposting information that could be used by a pharmacy professional to advise patients on organisations and resources available to support them in managing their condition. The leaflet should include resources that a pharmacy professional could refer to when advising patients on the management of their conditions, including the appropriate use of medicines.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the information that must be given to individuals about their medicines, giving reasons and examples to support the points made (AC4.1)

2   provide details of the information that must be given to individuals about the management of their condition, giving reasons and examples to support the points made (AC4.2).

Textbooks

Bennett P, Brown M – *Clinical Pharmacology*,12th edition (Elsevier, 2018)
ISBN 9780702073281

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition
(Dorling Kindersley, 2018) ISBN 9780241317617

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition
(Pharmaceutical Press, 2002) ISBN 9780853695073

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015)
ISBN 9781118902400

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition
(Elsevier, 2019) ISBN 9780702074486

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*,
5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition
(Elsevier, 2018) ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition
(Elsevier, 2018) ISBN 9780323476522

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*,
18th edition (Mosby, 2019) ISBN 9780323554732

Journals

Gastroenterology journals – www.omicsonline.org/gastroenterology-journals.php

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

Nutrition journals – www.omicsonline.org/nutrition-journals.php

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-
services/journals-and-databases

Pharmaceutical Journal – www.rpharms.com/publications/pharmaceutical-journal

Websites

www.medicines.org.uk/emc	Electronic Medicines Compendium
www.bnf.nice.org.uk/body-system/gastrointestinalsystem.html	British National Formulary – Gastrointestinal System
www.bnf.nice.org.uk/treatment-summary/enteral-nutrition.html	British National Formulary – Nutrition
www.nhs.uk	NHS Choices

Unit 13: Medicinal Treatments for Cardio-respiratory Conditions

Level: 3

Credit value: 6

Guided Learning Hours: 40

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of the cardiovascular and respiratory systems and to learn about the main medicines used in the treatment of related conditions. Apprentices will develop understanding of how to advise individuals on the effective management and treatment of associated conditions.

In this unit, you will learn about the structure and function of the cardiovascular system, including its physiology and pathophysiology. This unit gives you the opportunity to explore topic areas including the blood, heart and blood vessels. You will learn about the use of medicines to manage cardiovascular conditions and potential side effects of medicines used in the management of cardiovascular diseases.

You will learn about the structure and function of the respiratory system and explore common conditions, for example asthma and chronic obstructive pulmonary disease (COPD). This unit gives you an opportunity to understand the use of medicines to manage respiratory conditions and the side effects of medicines used to treat these conditions.

You will learn how to give individuals information on medicines used in the management of cardiovascular and respiratory conditions, and important patient counselling information, including self-care, inhaler technique and blood pressure management.

It is recommended that apprentices do not attempt this unit until they have completed the first learning outcome from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions*. Learning outcome 1 from Unit 14 ('Understand different types of human cells and tissue') provides a basis for much of the knowledge and understanding in this unit.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the respiratory and cardiovascular systems	1.1	Explain how the **structure** of the respiratory system aids breathing and gaseous exchange	**Respiratory system structure**: nasal cavity, pharynx, larynx, trachea, bronchi, bronchioles, alveoli, capillary network
		1.2	Describe the **structure** of the cardiovascular system	**Cardiovascular system structure**: blood, heart, blood vessels (arteries, arterioles, capillaries, venules, veins)
		1.3	Explain how the structure of the cardiovascular system relates to its **function**	**Cardiovascular system function**: the physiology and pathology relating to transport and homeostasis

Learning outcomes		Assessment criteria		Content
2	Understand how medicines are used in the treatment of conditions of the respiratory system	2.1	Describe **common conditions** affecting the respiratory system	**Common conditions**: asthma, chronic obstructive pulmonary disease (COPD), allergic conditions
		2.2	Explain how **common medicines** are used in the treatment of the respiratory conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and treatments, including agents and their actions, benefits and limitations and contraindications for the conditions listed
		2.3	Explain the reasons why **common side effects** may occur with medicines used to treat respiratory conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) and other reliable sources for common side effects of medicines for the conditions listed

Learning outcomes		Assessment criteria		Content
3	Understand how medicines are used in the treatment of conditions of the cardiovascular system	3.1	Describe **common conditions** affecting the cardiovascular system	**Common conditions**: congestive heart failure, hypertension, cardiac arrhythmias, angina, myocardial infarction, embolism, hyperlipidaemia, cardiac arrest
		3.2	Explain how **common medicines** are used in in the treatment of the cardiovascular conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and treatments, including agents and their actions, benefits and limitations and contraindications for the conditions listed
		3.3	Explain the reasons why **common side effects** may occur with medicines used to treat cardiovascular conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) and other reliable sources for common side effects of medicines for the conditions listed

Learning outcomes		Assessment criteria		Content
4	Understand the advice individuals need to manage their **condition**	4.1	Explain the **information** that must be given to individuals about their medicines and devices	**Condition**: respiratory; cardiovascular **Information**: dosage, frequency, storage, care, non-compliance, relevant contraindications, treatment pathways and any other appropriate information (e.g. take medicine with food), blood tests, lifestyle
		4.2	Explain the information that must be given to individuals about the **management of their condition**	**Management of their condition**: treatment pathways, self-care, self-monitoring (e.g. blood pressure and peak flow), signposting to information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines, changes to lifestyle **Airway function**: use of devices in airway disease, advising individuals in techniques and the use of inhalation devices, e.g. metered dose inhalers, breath-actuated inhalers, dry power inhalers, pacers, nebulisers, peak flow meters, assessment of lung function

Essential information for tutors and assessors

Essential resources

Facilities required for this unit include apprentices having access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and show evidence of contact with the profession and continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources, for example *Medicines Complete* and the *electronic Medicines Compendium (eMC)*. There may be online library resources available through the apprentices' education provider.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Apprentices are required to cover all the content **and**:

- for AC2.1 apprentices **must** describe asthma and chronic obstructive pulmonary disease (COPD)
- for AC3.1 apprentices **must** describe congestive heart failure, hypertension and hyperlipidaemia.

Learning outcome 1: Understand the respiratory and cardiovascular systems

An example of a suitable assignment to cover this learning outcome could be a report on the structure of both the respiratory and cardiovascular systems. The report would need to cover how the respiratory system aids breathing and gaseous exchange, and how the cardiovascular system relates to its function. Apprentices would need to demonstrate their understanding through reasoning and explanations of the structure and function of both the respiratory and cardiovascular systems.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of how the structure of the respiratory system aids breathing and gaseous exchange, using reasons and examples to support the points made (AC1.1)

2   give a clear account of the structure of the cardiovascular system, using their own words and including all the relevant information (AC1.2)

3   provide details of how the structure of the cardiovascular system relates to its function, using reasons and examples to support the points made (AC1.3).

Learning outcome 2: Understand how medicines are used in the treatment of conditions of the respiratory system

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet informing patients about how medicines are used to treat respiratory system conditions. The patient information leaflet would need to cover common conditions affecting the respiratory system, including asthma and COPD, and apprentices could choose two other conditions to include. The leaflet should include details of common medicines used in the treatment of the chosen respiratory system conditions and the potential side effects of each medicine. The patient information leaflet should consist of no more than two sides of A4 and should include signposting information for patients with respiratory conditions.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of **at least four** different common conditions affecting the respiratory system, using their own words and including all the relevant information. The conditions described must include asthma and chronic obstructive pulmonary disease (COPD) (AC2.1)

2   provide details of how common medicines are used in the treatment of **at least four** respiratory conditions (which need to be the same conditions described for AC2.1), giving reasons, examples and/or evidence to support the points made (AC2.2)

3   give reasons why common side effects may occur with medicines used to treat respiratory conditions (which need to be the same medicines explained for AC2.2), referring to examples and/or evidence to support the points made (AC2.3).

Learning outcome 3: Understand how medicines are used in the treatment of conditions of the cardiovascular system

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet informing patients about how medicines are used to treat cardiovascular system conditions. The patient information leaflet would need to cover common conditions affecting the cardiovascular system including congestive heart failure, hypertension and hyperlipidaemia, and apprentices could choose two other conditions to include. The leaflet should include details of common medicines used in the treatment of the chosen cardiovascular conditions and the potential side effects of each medicine. The patient information leaflet should consist of no more than two sides of A4 and should include signposting information for patients with cardiovascular conditions.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of **at least five** different common conditions affecting the cardiovascular system, using their own words and including all the relevant information. The conditions described must include congestive heart failure, hypertension and hyperlipidaemia (AC3.1)

2   provide details of how common medicines are used in the treatment of **at least five** cardiovascular conditions (which need to be the same conditions described for AC3.1), giving reasons, examples and/or evidence to support the points made (AC3.2)

3   give reasons why common side effects may occur with medicines used to treat cardiovascular conditions (which need to be the same medicines explained for AC3.2), referring to examples and/or evidence to support the points made (AC3.3).

Learning outcome 4: Understand the advice individuals need to manage their condition

An example of a suitable assignment to cover this learning outcome could be presentation slides with supporting speaker notes. The presentation would need to cover either one respiratory or one cardiovascular condition and should be designed to be delivered to an individual patient or group of patients diagnosed with the condition. Information should be provided in a patient-appropriate format and should cover the safe use of their medicines, monitoring requirements and management of their condition. Examples of patient advice and counselling topics, such as inhaler technique and blood pressure monitoring, can be found in the content for this learning outcome. Apprentices would not be required to deliver the presentation.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the information that must be given to individuals about their medicines and devices, giving reasons and examples to support the points made (AC4.1)

2   provide details of the information that must be given to individuals about the management of their condition, giving reasons and examples to support the points made (AC4.2).

Textbooks

Bennett P, Brown M – *Clinical Pharmacology*,12th edition (Elsevier, 2018)
ISBN 9780702073281

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition
(Dorling Kindersley, 2018) ISBN 9780241317617

Greenstein B, Greenstein A – *Concise Clinical Pharmacology*
(Pharmaceutical Press, 2006) ISBN 9780853695769

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition
(Pharmaceutical Press, 2002) ISBN 9780853695073

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015)
ISBN 9781118902400

Page C – *Crash Course: Pharmacology*, 5th edition (Elsevier, 2018)
ISBN 9780702073441

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition
(Elsevier, 2019) ISBN 9780702074486

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*,
5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition
(Elsevier, 2018) ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition
(Elsevier, 2018) ISBN 9780323476522

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*,
18th edition (Mosby, 2019) ISBN 9780323554732

Journals

British Journal of Pharmacology (British Pharmacological Society/Wiley-Blackwell)

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases

The British Medical Journal (BMJ Publishing Group Ltd)

The Pharmaceutical Journal (Pharmaceutical Press)

Websites

www.asthma.org.uk/	Asthma UK
www.bhf.org.uk/	British Heart Foundation
www.brit-thoracic.org.uk/document-library/clinical-information/asthma/btssign-asthma-guideline-quick-reference-guide-2016/	British Thoracic Society
cks.nice.org.uk/#?char=A	NICE Clinical Knowledge Summaries
www.nhs.uk/conditions/asthma/diagnosis/	NHS: Asthma
www.nhs.uk/conditions/cardiovascular-disease/#	NHS: Cardiovascular Disease
www.nhs.uk/conditions/chronic-obstructive-pulmonary-disease-copd/	NHS: COPD
www.nhs.uk/conditions/heart-failure/NHS	NHS: Heart Failure
www.pharmaceutical-journal.com/learning/learning-article/knowing-the-differences-between-copd-and-asthma-is-vital-to-good-practice/11085597.article	*Pharmaceutical Journal* article on asthma and COPD

Unit 14:

Medicinal and Non–medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions

Level: 3

Credit value: 6

Guided Learning Hours: 40

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of human cells and the musculoskeletal system and to learn about the main medicines and treatments of malignant diseases and musculoskeletal conditions. Apprentices will develop an understanding of how to advise individuals on the effective management and treatment of associated conditions and learn about preventative measures for malignant diseases.

In this unit, you will explore the structure, types and functions of human cells, blood and tissue, as well as looking at the structure and function of the musculoskeletal system. This will provide a platform for you to make links between cell changes/malignancies and how medicines and other therapies interact with them, including possible side effects. You will learn about common musculoskeletal conditions, related medicines and their side effects. In your role as a Pharmacy Technician, this unit will give you the underpinning knowledge required to be able to provide valid information to individuals on preventative measures and/or management of their condition.

It is recommended that apprentices complete learning outcome 1: *Understand different types of human cells and tissue* before attempting the other pharmacology units or *Unit 11: Biological Principles for Pharmacy Technicians*, as it provides a basis for much of the knowledge and understanding in those units.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand different types of human cells and tissue	1.1	Describe the **structure of human cells**	**Structure of human cells**: cell membrane, nucleus, cytoplasm, mitochondria, rough and smooth endoplasmic reticulum, Golgi body, lysosomes
		1.2	Describe the cells in **human blood**	**Human blood**: erythrocytes (red blood cells), leucocytes (white blood cells)
		1.3	Describe the main types of **human tissue**	
		1.4	Explain the functions of the main types of **human tissue**	**Human tissue**: epithelial, connective, muscle, nerve
2	Understand the musculoskeletal system	2.1	Describe the structure of the **musculoskeletal system**	**Musculoskeletal system**: bones, muscles, cartilage, tendons, ligaments, membranes, joints
		2.2	Explain how the structure of the musculoskeletal system relates to its **function**	**Function**: the physiology and pathology relating to movement, support, protection, blood cell production, storage of minerals (e.g. calcium)

Learning outcomes		Assessment criteria		Content
3	Understand how medicines and therapies are used in the treatment of malignant diseases	3.1	Describe the behavioural differences between normal and malignant cells	**Common malignant diseases**: breast cancer, leukaemia, melanoma, lymphoma, myeloma, prostate cancer, testicular cancer, cervical cancer, bowel cancer
		3.2	Describe **common malignant diseases**	
		3.3	Explain how **common medicines** are used in the treatment of malignant diseases	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and treatments, including agents and their actions, benefits and limitations and contraindications for the diseases listed
		3.4	Explain the reasons why **common side effects** may occur with medicines used to treat malignant diseases	**Common side effects**: refer to current edition of British National Formulary (BNF) and other reliable sources for common side effects of medicines for the diseases listed
		3.5	Describe how **other therapies** are used in the treatment of malignant diseases	**Other therapies**: targeted, tumour necrosis factor, gene therapy, radio-pharmaceuticals

Learning outcomes		Assessment criteria		Content
4	Understand how medicines are used in the treatment of musculoskeletal conditions	4.1	Describe **common conditions** affecting the musculoskeletal system	**Common conditions**: arthritis (e.g. osteoarthritis, rheumatoid arthritis), osteoporosis, scoliosis, gout, soft tissue conditions
		4.2	Explain how **common medicines** are used in the treatment of musculoskeletal conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and treatments, including agents and their actions, benefits and limitations, and contraindications for the conditions listed
		4.3	Explain the reasons why **common side effects** may occur with medicines used to treat musculoskeletal conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) and other reliable sources for common side effects of medicines for the conditions listed

Learning outcomes		Assessment criteria		Content
5	Understand the advice individuals need to manage their **condition**	5.1	Describe the **preventative measures** that can be provided to individuals in identifying possible malignant diseases	**Condition**: malignant disease; musculoskeletal
				Preventative measures: screening programme, self-examination
		5.2	Explain the **information** that must be given to individuals about their medicines	**Information**: dosage, frequency, storage, care, non- compliance, relevant contraindications and any other appropriate information (e.g. take medicine with food), precautions, blood tests
		5.3	Explain the information that must be given to individuals about **management of their condition**	**Management of their condition**: treatment pathways, self-care, self-monitoring, signposting to information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines, changes to lifestyle

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Apprentices are required to cover all the content and:

- for AC3.2 apprentices **must** describe leukaemia, lymphoma and myeloma and **one** from either breast cancer, melanoma, prostate cancer, testicular cancer, cervical cancer or bowel cancer

- for AC4.1 apprentices **must** describe arthritis (osteoarthritis and rheumatoid arthritis) and osteoporosis and **one** from either scoliosis, gout or soft tissue.

Learning outcome 1: Understand different types of human cells and tissue

An example of a suitable assignment to cover this learning outcome could be to produce a guide for new Pharmacy Technicians, introducing different types of human cells and tissue. The guide will need to include detailed descriptions of the structure of human cells including the common organelles. It should also include descriptions of the different cells found in human blood. The guide should include explanations of the types and function of tissue found in the human body including epithelial, connective, muscle and nerve tissue. Apprentices may wish to include labelled diagrams to support their descriptions.

Learning outcome 2: Understand the musculoskeletal system

An example of a suitable assignment to cover this learning outcome could be to produce a workbook on the structure and function of the musculoskeletal system for new and established Pharmacy Technicians to complete as part of their CPD. The workbook will need to include detailed descriptions of the structure of the human musculoskeletal system, ensuring that all components are referenced. Apprentices will then need to explain how the structure of the musculoskeletal system relates to its function, focusing on the physiology and pathology relating to movement, support, protection, blood cell production, storage of minerals (e.g. calcium). Apprentices may wish to include labelled diagrams to support their descriptions.

To satisfy the assessment criteria for these learning outcomes, apprentices will:

1   give a clear account of the structure of human cells, using their own words and including all the relevant information (AC1.1)

2   give a clear account of the cells in human blood, using their own words and including all the relevant information (AC1.2)

3   give a clear account of the main types of human tissue, using their own words and including all the relevant information (AC1.3)

4   provide details of the functions of the main types of human tissue, giving reasons and examples to support the points made (AC1.4).

5   give a clear account of the structure of the musculoskeletal system, using their own words and including all the relevant information (AC2.1)

6   provide details of how the structure of the musculoskeletal system relates to its function, giving reasons and examples to support the points made (AC2.2).

Learning outcome 3: Understand how medicines and therapies are used in the treatment of malignant diseases

An example of a suitable assignment to cover this learning outcome could be an information leaflet for new staff, covering leukaemia, lymphoma, myeloma and a choice of one other – breast cancer, melanoma, prostate cancer, testicular cancer, cervical cancer or bowel cancer. The leaflet will need to explain the behavioural differences between normal and malignant cells before describing the four malignant diseases. It should also include signposting to relevant agencies. The leaflet will then need to provide details of how common medicines are used in the treatment of the chosen malignant diseases. Apprentices will need to refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and treatments, including agents and their actions, benefits and limitations, and contraindications for the diseases referenced. The leaflet will need to explain why common side effects may occur with these medicines. Finally, the leaflet will need to describe how two other therapies, such as radiopharmaceuticals and gene therapy, are used in the treatment of each of the malignant diseases. Apprentices may wish to consider how personalised drugs are used in the treatment of malignant diseases.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of the behavioural differences between normal and malignant cells, using their own words and including all the relevant information (AC3.1)

2 give a clear account of common malignant diseases, including leukaemia, lymphoma and myeloma and one from either breast cancer, melanoma, prostate cancer, testicular cancer, cervical cancer or bowel cancer, using their own words and including all the relevant information (AC3.2)

3 provide details of how common medicines are used in the treatment of the malignant diseases described under AC3.2, giving reasons, examples and/or evidence to support the points made (AC3.3)

4 give reasons why common side effects may occur with the medicines used to treat the malignant diseases described under AC3.2, using examples and/or evidence to support the points made (AC3.4)

5 give a clear account of how **two** other therapies are used in the treatment of each of the malignant diseases described under AC3.2, using their own words and including all the relevant information (AC3.5).

Learning outcome 4: Understand how medicines are used in the treatment of musculoskeletal conditions

An example of a suitable assignment to cover this learning outcome could be a conference-style information poster to be displayed in the pharmacy. The poster will need to include relevant labelled diagrams to depict the common musculoskeletal areas affected by osteoarthritis, rheumatoid arthritis, osteoporosis and a choice of one other – scoliosis, gout or soft tissue conditions. Narrative sections below the diagrams will need to describe all of the identified diseases. The poster will also need to provide details of how common medicines are used in the treatment of the diseases. Apprentices will need to refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines and treatments, including agents and their actions, benefits, limitations, and contraindications for the diseases referenced. The leaflet will need to explain why common side effects may occur with these medicines.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of common conditions affecting the musculoskeletal system, including arthritis (osteoarthritis and rheumatoid arthritis) and osteoporosis and one from either scoliosis, gout or soft tissue conditions, using their own words and including all the relevant information (AC4.1)

2   provide details of how common medicines are used in the treatment of musculoskeletal conditions, giving reasons, examples and/or evidence to support the points made (AC4.2)

3   give reasons why common side effects may occur with the medicines used to treat the musculoskeletal conditions described under AC4.1, using examples and/or evidence to support the points made (AC4.3).

Learning outcome 5: Understand the advice individuals need to manage their condition

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet. The leaflet would need to describe preventative measures (screening programmes and self-examination) used to identify malignant diseases. The leaflet should also include a generic information section related to common medicines, covering dosage, frequency, storage, care, non-compliance, relevant contraindications and any other appropriate information (e.g. take medicine with food), outlining precautions and identifying relevant blood tests. The final section of the leaflet will need to cover management of conditions, including treatment pathways, self-care, self-monitoring, signposting to information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines and changes to lifestyle.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of the preventative measures that can be provided to individuals in identifying possible malignant diseases, using their own words and including all the relevant information (AC5.1)

2 provide details of the information that must be given to individuals about their medicines, giving reasons and examples to support the points made (AC5.2)

3 provide details of the information that must be given to individuals about management of their condition, giving reasons and examples to support the points made (AC5.3).

Textbooks

Bennett P, Brown M – *Clinical Pharmacology*, 12th edition (Elsevier, 2018)
ISBN 9780702073281

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition
(Dorling Kindersley, 2018) ISBN 9780241317617

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition
(Pharmaceutical Press, 2002) ISBN 9780853695073

Jenkins J – *Rheumatoid Arthritis: A self-help guide to getting on with your life*, 3rd edition
(How To Books, 2011) ISBN 9781845284633

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015)
ISBN 9781118902400

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition
(Elsevier, 2019) ISBN 9780702074486

Roberts A – *The Complete Human Body: The Definitive Visual Guide*, 2nd edition
*(*Dorling Kindersley, 2016) ISBN 9780241240458

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*,
5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition (Elsevier, 2018)
ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition
(Elsevier, 2018) ISBN 9780323476522

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*,
18th edition (Mosby, 2019) ISBN 9780323554732

Journals

Journal of Pharmacy Technology (https://uk.sagepub.com/en-gb/eur/journal-of-pharmacy-technology/journal202240)

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases

Pharmaceutical Journal – www.rpharms.com/publications/pharmaceutical-journal

Websites

www.medicines.org.uk/emc   electronic Medicines Compendium

www.nhs.uk/conditions/nhs-health-   NHS Health Checks
check/

Unit 15:

Microbiology for Pharmacy Technicians

Level: 3

Credit value: 5

Guided Learning Hours: 30

Unit summary

The aim of this unit is to give apprentices underpinning knowledge of the fundamental principles of microbiology as they relate to the work of a Pharmacy Technician.

In this unit, you will learn about the relationship between structures and functions in bacteria, viruses, protozoa and microscopic fungi, how microorganisms are classified and methods of identifying their presence. You will learn about how microorganisms reproduce, and how chemical and physical factors can affect their growth, including how different growth media can be used. You will explore the infections that can be caused by pathogenic microorganisms, and how they can be transmitted. You will learn how and why the growth of microorganisms can be monitored to study diseases, and the ways in which they can be handled to prevent contamination and infection. This will also assist you in your role of antibiotic stewardship.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the structure, function and classification of microorganisms	1.1	Describe **methods** used to classify **microorganisms**	**Methods**: binomial nomenclature; light and electron micrographs, morphology, Gram staining
		1.2	Explain how the **structure** of microorganisms relates to their function	**Microorganisms**: bacteria, viruses, microscopic fungi, protozoa
				Structure: size, shape, cell arrangements, cellular structure including genetic material and ability to reproduce without a host
2	Understand factors affecting microbial growth	2.1	Describe **growth and reproduction** of microorganisms	**Growth and reproduction**: binary fission, asexual reproduction, budding, growth curves, nutrition
		2.2	Explain the **chemical and physical factors** that affect the **growth** of microorganisms	**Physical factors affecting growth**: pH, temperature, osmotic and atmospheric pressure
		2.3	Explain the use of different **growth media**	**Chemical factors affecting growth**: water, oxygen, carbon, nitrogen, phosphorous, other elements
				Growth media: liquid, semi-solid, selective/differential, enriched

Learning outcomes		Assessment criteria		Content
3	Understand how the growth of microorganisms is monitored and controlled	3.1	Explain methods of **monitoring** the **growth** of microorganisms	**Monitoring microbial growth**: environmental/ people/product sampling; swabs, media plates, bacterial counts
		3.2	Explain methods of **controlling** the **growth** of microorganisms	**Control**: basic principles of hygiene including hand washing and sanitisation; disinfectants, antiseptics, sterilisation methods, aseptic technique, use of personal protective equipment.
4	Understand transmission of infection	4.1	Identify **infections** caused by pathogenic microorganisms	**Infections**: bacteria, viruses, microscopic fungi, protozoa
		4.2	Explain the process of **transmission** of infections	**Process of transmission**: transmission cycle; airborne, direct contact, indirect contact

Essential information for tutors and assessors

Essential resources

Ideally, apprentices should have access to a laboratory equipped with the materials to carry out microbiological experiments, such as autoclaves, incubation equipment, growth media and associated glassware/equipment. Where this is not possible, the use of technology to allow apprentices to experience laboratory experiments, for example through videos or Skype®, or ready-prepared packs of experiments sent to the apprentice's workplace are acceptable alternatives.

Access to a library containing suitable microbiology textbooks, online learning resources and relevant online/print journals would also be ideal for apprentices, but, where this is not possible, technology should be used to give apprentices access to an acceptable range of learning resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcome 1: Understand the structure, function and classification of microorganisms

An example of a suitable assignment to cover this learning outcome could be a report about each type of microorganism listed in the unit content, exploring the structure, function and classification methods for each.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of **at least three** methods used to classify microorganisms, using their own words and including all the relevant information (AC1.1)

2   provide details of how the structure of **at least three** types of microorganism (to include bacteria, virus and **at least one** other) relates to their function, giving reasons and examples to support the points made (AC1.2).

Learning outcome 2: Understand factors affecting microbial growth

An example of a suitable assignment to cover this learning outcome could be write-ups of laboratory investigations into the factors affecting the growth and reproduction of microorganisms. Apprentices will need to supplement these write-ups with additional information about factors affecting growth and reproduction that they have not investigated. This should include at least one growth curve.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of growth and reproduction of microorganisms, using their own words and including all the relevant information (AC2.1)

2   provide details of **at least three** chemical (to include water, oxygen and **at least one** other) and **at least three** physical factors that affect the growth of microorganisms, giving reasons and examples to support the points made (AC2.2)

3   provide details of the use of **at least three** different growth media, giving reasons and examples to support the points made (AC2.3).

Learning outcome 3: Understand how the growth of microorganisms is monitored and controlled

Learning outcome 4: Understand transmission of infection

An example of a suitable assignment to cover these learning outcomes could be an information booklet or presentation on the monitoring, transmission and control of microorganisms in the pharmacy. Apprentices will need to outline methods of monitoring microbial growth, along with how and why microbial growth can and should be controlled.

To satisfy the assessment criteria for these learning outcomes, apprentices will:

1 provide details of **at least four** methods of monitoring the growth of microorganisms, giving reasons, examples and/or evidence to support the points made (AC3.1)

2 provide details of **at least five** methods of controlling the growth of microorganisms, giving reasons, examples and/or evidence to support the points made (AC3.2).

3 state **at least eight** infections caused by pathogenic microorganisms. **At least two** must be caused by bacteria, **at least two** by viruses, **at least two** by microscopic fungi and **at least two** by protozoa (AC4.1)

4 provide details of the process of transmission of infections, giving reasons, examples and/or evidence to support the points made (AC4.2).

Textbooks

Barer M, Irving W – *Medical Microbiology: A Guide to Microbial Infections: Pathogenesis, Immunity, Laboratory Investigation and Control*, 19th edition (Elsevier, 2018)
ISBN 9780702072000

Denyer S, Hodges N, Gorman S, Gilmore B (editors) – *Hugo and Russell's Pharmaceutical Microbiology*, 8th edition (Wiley, 2011) ISBN 9781444330632

Hillis, D et al – *Life: The Science of Biology*, 11th edition (W H Freeman, 2017)
ISBN 9781319010164

Madigan M – *Brock Biology of Microorganisms*, 15th edition (Pearson, 2018)
ISBN 9781292235103

Journals

Biological Sciences Review (Hodder Education)

The Pharmaceutical Journal (Royal Pharmaceutical Society)

Websites

microbiologysociety.org/education-outreach/resources.html	Teaching and learning resources from the Microbiology Society
www.nhs.uk/	National Health Service
www.nuffieldfoundation.org/practical-biology	Practical experiments that include microbiology

Unit 16: Actions and Uses of Medicines

Level: 3

Credit value: 9

Guided Learning Hours: 60

Unit summary

This unit gives apprentices basic information and concepts to help them understand in general terms how medicines work.

In this unit, you will explore pharmacokinetics and pharmacodynamics to understand how they influence the actions and uses of medicines. You will learn about the modes of action of medicines and their uses, including why medicines are administered via different routes in the body.

You will research drug interactions and medicine optimisation to understand how individual patient factors can influence the use of medicines. This unit also gives you the opportunity to understand how to use pharmacy resources to research pharmaceutical and medicinal information in order to deal with pharmaceutical queries. You will use a range of pharmacy resources to identify the importance of evidence-based medicine in ensuring the safe and effective use of medicines.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the principles of how medicines work in the human body	1.1	Describe the **modes of actions** of medicines on the human body	**Modes of action**: drug actions at receptor sites, agonists and antagonists, partial agonists, competition, reversibility, enzymes and ion channels with common examples, non-specific drug action, genetic mechanisms
		1.2	Explain the reasons for using different **routes** for the administration of medicines	
				Pharmacology: routes by which drugs are delivered to the body including oral, rectal, injectable, transdermal, inhaled, advantages and disadvantages of each route
		1.3	Explain how medicines are **processed** by the body	**Processed:**
		1.4	Explain how the approaches to **personalised medicines** may support the management of an individual's health	**Pharmacodynamics**: route by which drugs travel through the body to the site of action, factors that influence the amount of drug that reaches the site of action and the final fate of therapeutic agents, influence of factors such as absorption, metabolism, excretion
				Continued on next page

Learning outcomes	Assessment criteria	Content
		Continued from previous page
		Pharmacokinetics: clearance; volume of distribution; half-life; Lethal Dose 50% (LD50), bioavailability; protein binding; clearance by the liver and kidneys; how dosage regimens are designed; purpose of therapeutic drug monitoring.
		Approaches: diagnoses, intervention, drug development, usage, issues

Learning outcomes		Assessment criteria		Content
2	Understand the uses and limitations of medicines	2.1	Describe the common dosage regimens for drug-drug and drug-food **interactions**	**Interactions**: chemical incompatibilities, nutrition/drug incompatibilities, genetic factors causing incompatibilities, pharmacokinetics and pharmacodynamics, additive and antagonistic, concentration and reduction
		2.2	Evaluate how **individual factors** affect successful medicinal and treatment optimisation	**Common adverse interactions**: St John's Wort, grapefruit juice, Seville oranges, limes, pomelos, green leafy vegetables, dairy products, fibre, liquorice, foods containing tyramine, monoamine oxidase inhibitors (MAOIs)
		2.3	Evaluate how **medicine factors** affect successful medicine optimisation	**Individual factors**:
				Demographic factors: age, gender, ethnicity, lifestyle
				Social factors: lifestyle, employment, education, housing, income
				Physiological factors: liver and renal impairment, allergies, altered body surface
				Medicine factors: side effects, route of administration, clinical trials, adverse drug reactions (ADRS)

Learning outcomes		Assessment criteria		Content
3	Understand the use of standard pharmacy resources to research pharmaceutical queries	3.1	Evaluate the **suitability** of different sources of pharmaceutical **information** for pharmaceutical queries	**Suitability**: current, authoritative, accurate **Information**: British National Formulary (BNF), other pharmaceutical texts, e.g. Martindale, British Pharmacopoeia, Pharmaceutical Codex, Pharmaceutical Journal, other medical journals, online resources, e.g. Micromedex, Medline, eBNF **Evidence-based practice**: definitions, benefits, practices, research methodologies (qualitative, quantitative)
		3.2	Explain the importance of **evidence-based practice** for pharmacy professionals	

Essential information for tutors and assessors

Essential resources

Facilities required for this unit include apprentices having access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and show evidence of contact with the profession and continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources, for example the *British National Formulary*, *Medicines Complete* and the *Electronic Medicines Compendium (eMC)*. There may be online library resources available through apprentices' education provider.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcome 1: Understand the principles of how medicines work in the human body

An example of a suitable assignment to cover this learning outcome could be an information booklet for fellow pharmacy professionals that explains the modes of action of medicines on the human body. The information booklet would need to cover how the body processes medicines and the reasons for different administration routes. The booklet should provide information on how medicine optimisation can be achieved by personalising patient medicines in support of an individual's health.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of **at least six** modes of actions of medicines on the human body, using their own words and including all the relevant information (AC1.1)

2   give reasons for using different routes for the administration of medicines, using examples and/or evidence to support the points made (AC1.2)

3   provide details of how medicines are processed by the body, giving reasons and examples to support the points made (AC1.3)

4   provide details of how the approaches to personalised medicines may support the management of an individual's health, giving reasons, examples and/or evidence to support the points made (AC1.4).

Learning outcome 2: Understand the uses and limitations of medicines

An example of a suitable assignment to cover this learning outcome could be presentation slides with supporting speaker notes, designed to be delivered to fellow pharmacy professionals. The presentation would need to cover both drug-drug interactions and drug-food interactions. In addition, apprentices would need to consider and present information on both individual and medicinal factors that affect successful medicine optimisation. Apprentices could also address adverse drug reactions, pharmacovigilance and the Yellow Card Scheme. Apprentices would not be required to deliver the presentation.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the common dosage regimens for drug-drug and drug – food interactions, using their own words and including all the relevant information (AC2.1)

2   review information about how **at least three** individual factors (**at least one** demographic, **one** social and **one** physiological) affect successful medicinal and treatment optimisation, drawing on evidence and relevant data to come to a conclusion (AC2.2)

3   review information about how **at least three** medicine factors affect successful medicine optimisation, drawing on evidence and relevant data to come to a conclusion (AC2.3).

Learning outcome 3: Understand the use of standard pharmacy resources to research pharmaceutical queries

An example of a suitable assignment to cover this learning outcome could be a pharmacy resources database in a format of the apprentice's choosing (for example Word, Excel or PowerPoint). The database would need to list different resources that provide suitable pharmaceutical information, with supporting information for each resource identifying its advantages and disadvantages. Alongside the resources database, apprentices would need to produce a short report, based on their findings when researching pharmacy resources for the database, on evidence-based medicine and its importance in pharmacy practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   review the suitability of different sources of pharmaceutical information for pharmaceutical queries, drawing on evidence including strengths, weaknesses, relevant data and information to come to a conclusion (AC3.1)

2   provide details of the likely impacts of the use of evidence-based practice by pharmacy professionals, giving reasons, examples and/or evidence to support the points made, and coming to a conclusion as to how important evidence-based practice is for pharmacy professionals (AC3.2).

Textbooks

Bennett P, Brown M – *Clinical Pharmacology*,12th edition (Elsevier, 2018)
ISBN 9780702073281

Blenkinsopp A, Blenkinsopp J, Duerden M – *Symptoms in the Pharmacy: A Guide to the Management of Common Illnesses*, 8th edition (Wiley-Blackwell, 2018)
ISBN 9781119317968

Dodds L (editor) – *Drugs in Use: Case Studies for Pharmacists and Prescribers*, 5th edition (Pharmaceutical Press, 2013) ISBN 9780857110916

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition
(Dorling Kindersley, 2018) ISBN 9780241317617

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition
(Pharmaceutical Press, 2002) ISBN 9780853695073

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Nathan A – *Non-Prescription Medicines*, 4th edition (Pharmaceutical Press, 2010)
ISBN 9780853698869

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015)
ISBN 9781118902400

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition
(Elsevier, 2019) ISBN 9780702074486

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*, 5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition (Elsevier, 2018)
ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition
(Elsevier, 2018) ISBN 9780323476522

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*
18th edition (Mosby, 2019) ISBN 9780323554732

Journals

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases

Websites

www.bnf.nice.org.uk/	British National Formulary online
broughttolife.sciencemuseum.org.uk/broughttolife/themes/controversies/thalidomide	Background to the need for pharmacovigilance
www.england.nhs.uk/medicines/medicines-optimisation/	NHS England Medicines Optimisation
www.gov.uk/guidance/implementing-the-falsified-medicines-directive-safety-features	Information about the Falsified Medicines Directive
www.medicines.org.uk/emc	electronic Medicines Compendium
www.nice.org.uk/guidance/ng5/chapter/Introduction	NICE Medicines Optimisation
www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Policy/helping-patients-make-the-most-of-their-medicines.pdf	RPSBG Medicines Optimisation: Good Practice Guidance
https://yellowcard.mhra.gov.uk/the-yellow-card-scheme/	The MHRA's Yellow Card Scheme

Unit 17: Medicinal and Non–medicinal Treatments for Central Nervous System Conditions

Level: 3

Credit value: 6

Guided Learning Hours: 30

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of the central nervous system and the medicines used in the treatment of related conditions. The unit also addresses how anaesthesia and pain are treated and managed. Finally, apprentices will acquire the knowledge that a Pharmacy Technician needs in order to advise individuals on the effective management and treatment of associated conditions.

In this unit, you will explore the structure and function of the central nervous system, before examining associated disorders, common treatment medicines and their side effects. You will then have the opportunity to study how medicines and non-medicinal treatments are used in the treatment of mental ill health. The unit addresses the complex nature of the human central nervous system firstly through the analgesic ladder, by focusing on the treatment and management of pain, and then moving deeper into pain and control centres, which will develop your understanding of how both general and local anaesthetics operate, including possible side effects. Linking all of these to the role of the Pharmacy Technician, you will then have the opportunity to demonstrate your knowledge of the advice that individuals will need to manage conditions relating to the central nervous system, mental ill health and pain.

It is recommended that apprentices do not attempt this unit until they have completed the first learning outcome from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions*. Learning outcome 1 from Unit 14 ('Understand different types of human cells and tissue') provides a basis for much of the knowledge and understanding in this unit.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the central nervous system	1.1	Describe the **structure** of the central nervous system	**Structure**: brain (cerebrum, cerebellum, pons, medulla), spinal cord (spinal nerves, plexa), neurons (sensory, motor, relay), neurotransmitters (dopamine, serotonin)
		1.2	Explain how the structure of the central nervous system relates to its **function**	**Function**: the physiology and pathology relating to the initiation and transmission of the nerve impulse, sympathetic and parasympathetic control, receptors, effectors, reflex arc

Learning outcomes		Assessment criteria		Content
2	Understand how medicines are used in the treatment of conditions of the central nervous system	2.1	Describe **conditions** affecting the central nervous system	**Conditions**: epilepsy, Parkinson's disease, attention deficit hyperactivity disorder (ADHD)
		2.2	Explain how **common medicines** are used in the treatment of central nervous system conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		2.3	Explain the reasons why **common side effects** may occur with medicines used to treat central nervous system conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
3	Understand how medicines and non-medicinal treatments are used in the treatment of mental ill health	3.1	Describe **forms of mental ill health**	**Forms of mental ill health**: anxiety, bipolar, sleep, eating, depression, psychosis (e.g. schizophrenia, delusional disorders, mania), addiction, trauma, dementia
		3.2	Explain how **common medicine and non-medicinal treatments** are used in the treatment of mental ill health	**Common medicine and non-medicinal treatments**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		3.3	Explain the reasons why **common side effects** may occur with medicines and non-medicinal treatments used to treat mental ill health	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
4	Understand how medicines are used in the treatment and management of pain	4.1	Explain how the **analgesic ladder** is applied in pharmacy practice	**Analgesic ladder**: the need for regular pain control and the pain ladder, reasons for adjuvant drugs; limitations of analgesia, different types of pain (acute, chronic, referred, nociceptive, neuropathic, sensory hypersensitivity), causes of pain
		4.2	Explain how **common medicine and non-medicinal treatments** are used in the management of pain	
		4.3	Explain the reasons why **common side effects** may occur with medicines used in the treatment and management of pain	**Common medicine and non-medicinal treatments**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
				Common side effects: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
5	Understand how medicines are used in anaesthesia	5.1	Explain the requirement for combination drug use in **general anaesthesia**	**General anaesthesia**: concept of general anaesthesia, stages of anaesthesia, combination drug use (intravenous anaesthetics, inhalation anaesthetics, anti-muscarinic, anxiolytic, analgesia, antiemetic, perioperative drugs, muscle relaxants, reversal)
		5.2	Explain the benefits and limitations of the different administration routes for **local anaesthetics**	
		5.3	Explain the reasons why **common side effects** may occur following the administration of anaesthetics	**Local anaesthesia**: routes of administration including epidural, intrathecal and intravenous regional anaesthesia, use of vasoconstrictors and action of local anaesthetic
				Common side effects: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed
6	Understand the advice individuals need to manage their **condition**	6.1	Explain the **information** that must be given to individuals about their medicines	**Condition**: central nervous system; mental ill health; pain
				Information: dosage, frequency, storage, care, contraindications, other appropriate information, e.g. take medicine with food
		6.2	Explain the information that must be given to individuals about **management** of their condition	**Management**: treatment pathways, self-care, self-monitoring, signposting to other information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines, changes to lifestyle

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Apprentices are required to cover all the content and:

- for AC2.1 apprentices **must** describe epilepsy and Parkinson's disease
- for AC3.1 apprentices **must** describe addiction, dementia and depression.

Learning outcome 1: Understand the central nervous system

An example of a suitable assignment to cover this learning outcome could be the completion of a worksheet. Apprentices would need to label a diagram of the central nervous system correctly, indicating where the brain (cerebrum, cerebellum, pons, medulla), spinal cord (spinal nerves, plexa), neurons (sensory, motor, relay) and neurotransmitters (dopamine, serotonin) are situated. Apprentices would then need to indicate the function of the central nervous system by explaining the physiology and pathology relating to the initiation and transmission of the nerve impulse, sympathetic and parasympathetic control, receptors, effectors and reflex arc. Reasons and examples would need to be provided as supportive commentary to demonstrate knowledge.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of the structure of the central nervous system, using their own words and including all the relevant information (AC1.1)

2 provide details of how the structure of the central nervous system relates to its function, giving reasons and examples to support the points made (AC1.2).

Learning outcome 2: Understand how medicines are used in the treatment of conditions of the central nervous system

An example of a suitable assignment to cover this learning outcome could be an information chart for patients on epilepsy and Parkinson's disease, with the first column containing a description of these central nervous system conditions, the second column explaining common medicines used in their treatment, and the third column explaining common side effects that occur with these medicines. Examples and/or evidence will need to be included to support points made in the second and third columns, and clear reference to the most up-to-date information from the BNF should be demonstrated.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of epilepsy and Parkinson's disease, using their own words and including all the relevant information (AC2.1)

2 provide details of how common medicines are used in the treatment of epilepsy and Parkinson's disease, giving reasons, examples and/or evidence to support the points made (AC2.2)

3 give reasons why common side effects may occur with medicines used to treat epilepsy and Parkinson's disease, using examples and/or evidence to support the points made (AC2.3).

Learning outcome 3: Understand how medicines and non-medicinal treatments are used in the treatment of mental ill health

An example of a suitable assignment to cover this learning outcome could be a quick reference guide sheet about addiction, dementia and depression for staff in practice in the form of a flow chart. Each of the conditions should be clearly headed at the top of the A4 sheet, with a succinct, valid description underneath. Continuing down the chart (graphics such as arrows should be used) details of common medicines used to treat these three conditions will need to be provided, with clear reference to examples and evidence from the BNF. The final stage of the flow chart should list and explain common side effects associated with the medicines listed, with clear reference to examples and evidence from the BNF.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of addiction, dementia and depression, using their own words and including all the relevant information (AC3.1)

2   provide details of how common medicine and non-medicinal treatments are used in the treatment of addiction, dementia and depression, giving reasons, examples and/or evidence to support the points made (AC3.2)

3   give reasons why common side effects may occur with the medicines and non-medicinal treatments used to treat addiction, dementia and depression, giving reasons, examples and/or evidence to support the points made (AC3.3).

Learning outcome 4: Understand how medicines are used in the treatment and management of pain

An example of a suitable assignment to cover this learning outcome could be a poster to be displayed in the pharmacy. The poster would need to describe how the analgesic ladder is applied in pharmacy practice by outlining the need for regular pain control and the pain ladder, reasons for adjuvant drugs, limitations of analgesia, different types of pain (acute, chronic, referred, nociceptive, neuropathic, sensory hypersensitivity) and causes of pain. The poster will also need to provide three examples of commonly used medicines and three examples of common non-medicinal treatments used in pain management. Clear reference to examples and evidence from the BNF will need to be included. Alongside the examples of commonly used medicines, the poster will need to include a section to explain why common side effects could affect individuals taking these medicines, again with clear reference to examples and evidence from the BNF.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of how the analgesic ladder is applied in pharmacy practice, giving reasons, examples and/or evidence to support the points made (AC4.1)

2   provide details of how **three** common medicines and **three** common non-medicinal treatments are used in the management of pain, giving reasons, examples and/or evidence to support the points made (AC4.2)

3   give reasons why common side effects may occur with the medicines used in the treatment and management of pain identified under AC4.2, using examples and/or evidence to support the points made (AC4.3).

Learning outcome 5: Understand how medicines are used in anaesthesia

An example of a suitable assignment to cover this learning outcome could be a short question and answer sheet. The first section of the question and answer sheet could ask apprentices to answer questions on the use of combination drugs in general anaesthesia (or a 'true or false' layout could be used) correctly and will need to include the concept of general anaesthesia, stages of anaesthesia and combination drug use (intravenous anaesthetics, inhalation anaesthetics, anti-muscarinic, anxiolytic, analgesia, antiemetic, perioperative drugs, muscle relaxants and reversal). The next section of the question and answer sheet will need to focus on the benefits and limitations of the different administration routes for local anaesthetics, to include references to epidural, intrathecal and intravenous regional anaesthesia, use of vasoconstrictors and action of local anaesthetic. Finally, the question and answer sheet will need to address the reasons why common side effects may occur following the administration of anaesthetics. Apprentices will need to make clear references to the BNF and should be encouraged to provide relevant examples and evidence throughout.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 provide details of the requirement for combination drug use in general anaesthesia, giving reasons, examples and/or evidence to support the points made (AC5.1)

2 provide details of the benefits and limitations of the different administration routes for local anaesthetics giving reasons, examples and/or evidence to support the points made (AC5.2)

3 give reasons why common side effects may occur following the administration of anaesthetics, using examples and/or evidence to support the points made (AC5.3).

Learning outcome 6: Understand the advice individuals need to manage their condition

An example of a suitable assignment to cover this learning outcome could be an information leaflet for new staff to use as a reference point. The leaflet will need to focus on the three related areas covered in this unit (the central nervous system, mental ill health and pain). Section 1 will need to focus on the information that must be given to individuals regarding the medicines they take for these disorders, including the dosage, frequency, storage, care, contraindications and other appropriate information (e.g. take medicine with food). Relevant reasons and examples will need to be included to support the points made. Section 2 will need to focus on the information that must be given to individuals regarding management of their condition, including treatment pathways, self-care, self-monitoring, signposting to other information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines and changes to lifestyle. Again, relevant reasons and examples will need to be included to support the points made.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 provide details of the information that must be given to individuals on their medicines, giving reasons and examples to support the points made (AC6.1)

2 provide details of the information that must be given to individuals on the management of their condition, giving reasons and examples to support the points made (AC6.2).

Textbooks

Allman K, Wilson I, O'Donnell A – *Oxford Handbook of Anaesthesia*, 4th edition (Oxford University Press, 2016) ISBN 9780198719410

Bennett P, Brown M – *Clinical Pharmacology*,12th edition (Elsevier, 2018) ISBN 9780702073281

Crossman R – *Neuroanatomy: An Illustrated Colour Text*, 4th edition (Churchill Livingstone, 2010) ISBN 9780702030864

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition (Dorling Kindersley, 2018) ISBN 9780241317617

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition (Pharmaceutical Press, 2002) ISBN 9780853695073

Kinsella C, Kinsella C – *Introducing Mental Health: A Practical Guide*, 2nd edition (Jessica Kingsley Publishers, 2015) ISBN 9781849055963

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015) ISBN 9781118902400

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition (Elsevier, 2019) ISBN 9780702074486

Roberts A – *The Complete Human Body: The Definitive Visual Guide*, 2nd edition (Dorling Kindersley, 2016) ISBN 9780241240458

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*, 5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition (Elsevier, 2018) ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition (Elsevier, 2018) ISBN 9780323476522

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*, 18th edition (Mosby, 2019) ISBN 9780323554732

Journals

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases

Pharmaceutical Journal – www.rpharms.com/publications/pharmaceutical-journal

The Pharmacist – www.thepharmacist.co.uk/

Websites

www.bnf.org/	BNF online
www.britishpainsociety.org/static/uploads/resources/files/pmp2013_main_FINAL_v6.pdf	Pain management in adults
www.evidence.nhs.uk/search?q=non+pharmacological+pain+management	Non-pharmacological pain management

Unit 18: Medicinal Methods for the Prevention, Protection from and Treatment of Infections

Level: 3

Credit value: 6

Guided Learning Hours: 40

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of the blood, and how infections are prevented through the use of vaccines and anti-microbial agents. The unit also covers how medicines and immunological products are used to manage infections. Finally, apprentices will acquire the knowledge that a Pharmacy Technician needs in order to advise individuals on the effective management and treatment of associated conditions.

In this unit, you will explore the structure and function of human blood, and how this knowledge supports your understanding of common infections and the medicines used to treat them. You will study a range of common infections, including fungal infections, infestations, bacterial infections such as tuberculosis, urinary tract infections (UTI) and lower respiratory tract infections, and viral infections such as influenza, common cold, herpes simplex and human immunodeficiency virus (HIV). Associated symptoms will also be covered.

Linking this knowledge to your role as a Pharmacy Technician, you will then explore the common medicines used to treat these infections and their side effects. You will also learn about the role and choice of anti-microbials in the control of infections. Moving on to the uses of commonly available immunological products, you will study the general principles of vaccination to include vaccination and immune response, the reasons for immunisation and immunisation schedules. You will also look at the UK diseases covered by vaccination and their symptoms, the reasons for vaccination, the vaccines and antisera available and the limitations for the use of each. The care of immunological products such as records, storage, transport, disposal etc. will be explored, in addition to the use of immunoglobulins.

Finally, you will gain the required knowledge to provide individuals with essential information on the medicines they take, as well as how to manage their own health.

It is recommended that apprentices do not attempt this unit until they have completed the following:

- The first learning outcome from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions*. Learning outcome 1 from Unit 14 ('Understand different types of human cells and tissue') provides a basis for much of the knowledge and understanding in this unit.

- *Unit 15: Microbiology for Pharmacy Technicians*. Unit 15 provides a basis for the knowledge and understanding in learning outcomes 2 and 3 of this unit.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the function of blood	1.1	Describe the **structure** of blood	**Structure**: leucocytes (white cells), erythrocytes (red cells, platelets, blood types
		1.2	Explain how the structure of blood relates to its **function**	**Function**: the physiology and pathology relating to carrying oxygen, clotting, defence; optimum levels
2	Understand how medicines are used in the treatment of infections	2.1	Describe **common infections** and their associated symptoms	**Common infections**: bacterial (tuberculosis, urinary tract infections (UTI), lower respiratory tract infection, conjunctivitis, impetigo, cellulitis), viral (influenza, common cold, herpes simplex, human immunodeficiency virus (HIV)), fungal (aspergillosis, candidiasis, nail and skin fungal infections), protozoal (malaria), infestations (roundworm, tapeworm and threadworm), sepsis
		2.2	Explain how **common medicines** are used to treat infections	
		2.3	Explain the reasons why **common side effects** may occur with medicines used to treat infections	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed

Learning outcomes	Assessment criteria		Content
	2.4	Explain the role of **anti-microbials** in the control of infections	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed
	2.5	Explain **factors** that influence the selection of antimicrobial medicines	**Anti-microbials**: anti-microbial resistance (AMR), anti-microbial stewardship (AMS), allergies, implications for over-use, over-prescribing of antibiotics, classes of antibiotics, how antibiotics work; prophylaxis
			Factors:
			Individual: renal function, hepatic function, age, pregnancy, lactation, allergy, host defence mechanism, conditions of the nervous system
			Non-individual: local factors at site of action, cost, pharmacokinetics

Learning outcomes		Assessment criteria		Content
3	Understand the uses of commonly available immunological products	3.1	Explain the **general principles of vaccination**	**General principles of vaccination**: vaccination and immune response, reasons for immunisation, immunisation schedule, immunisation of high-risk groups, immunisation procedures for international travel, immunisation procedures in the event of pandemics
		3.2	Explain the use of **vaccines**	
		3.3	Explain the care of **immunological products**	
		3.4	Explain the use of **immunoglobulins**	**Vaccines**: UK vaccination schedule, diseases covered and their symptoms, reasons for vaccination, vaccines and antisera available and limitations for the use of each against disease, care of vaccines (records, storage, transport, disposal, cold chain)
				Care of immunological products: records, storage, transport, disposal, cold chain, examples of best practice, workplace policies
				Immunoglobulins: normal immunoglobulins, specific immunoglobulins, anti-D immunoglobulin availability, reasons for use

Learning outcomes		Assessment criteria		Content
4	Understand the advice individuals need to manage their health	4.1	Explain the **information** that must be given to individuals about their medicines	**Information**: dosage, frequency, storage, care, non-compliance, relevant contraindications and any other appropriate information, e.g. take medicine with food, prophylaxis, resistance.
		4.2	Explain the information that must be given to the individuals about the **management of their health**	**Management of their health**: vaccinations; infections; treatment pathways, self-care, self-monitoring, signposting to information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines, changes to lifestyle

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Apprentices are required to cover **all** the content and:

for AC2.1 apprentices **must** describe bacterial infections (tuberculosis, UTI, lower respiratory tract infection, conjunctivitis, impetigo), viral infections (influenza, common cold, herpes simplex), fungal (aspergillosis, candidiasis, nail and skin fungal infections), protozoal (malaria), and infestations (roundworm, tapeworm and threadworm).

Learning outcome 1: Understand the function of blood

An example of a suitable assignment to cover this learning outcome could be a poster to be displayed in the pharmacy. The poster will need to include a clear account of the structure of the four components in blood: red blood cells, white blood cells, platelets and plasma. The function of each will need to be explained, to include the physiology and pathology relating to carrying oxygen, clotting, defence and optimum levels. A list of blood types should also be included, all supported with valid evidence.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the structure of blood, using their own words and including all the relevant information (AC1.1)

2   provide details of how the structure of blood relates to its function, giving reasons and examples to support the points made (AC1.2).

Learning outcome 2: Understand how medicines are used in the treatment of infections

An example of a suitable assignment to cover this learning outcome could be the development of an information booklet for new Pharmacy Technician staff. The information leaflet will need to be comprehensive and must include clear descriptions of the following:

- bacterial infections (tuberculosis, UTI, lower respiratory tract infection, conjunctivitis and impetigo)

- viral infections (influenza, common cold and herpes simplex)

- infections (aspergillosis, candidiasis, nail and skin fungal infections)

- protozoal infections (malaria)

- infestations (roundworm, tapeworm and threadworm).

After each description as above, details of the common medicines used to treat each infection need to be added, to include all common side effects. Examples from practice and credible evidence (e.g. BNF) need to be included to support all points made.

To complete the information leaflet, a section on the role of anti-microbial treatments to control infections needs to be included. Anti-microbial resistance (AMR), anti-microbial stewardship (AMS), allergies, implications for over-use, over-prescribing of antibiotics, classes of antibiotics, how antibiotics work and prophylaxis should be explained. The safe use of anti-microbial treatments needs to be addressed by discussing the factors to be considered prior to selection, as set out in the content. Reasons, examples and credible evidence will need to be included to support all points made.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account of common infections and their associated symptoms, including bacterial (tuberculosis, UTI, lower respiratory tract infection, conjunctivitis, impetigo), viral (influenza, common cold, herpes simplex), fungal (aspergillosis, candidiasis, nail and skin fungal infections), protozoal (malaria), and infestations (roundworm, tapeworm and threadworm). Apprentices need to use their own words and include all the relevant information (AC2.1)

2 provide details of how common medicines are used to treat the infections described under AC2.1, giving reasons, examples and/or evidence to support the points made (AC2.2)

3 give reasons why common side effects may occur with the medicines used to treat the infections described under AC2.1, using examples and/or evidence to support the points made (AC2.3).

4 provide details of the role of anti-microbials in the control of infections, giving reasons, examples and/or evidence to support the points made (AC2.4)

5 provide details of factors that influence the selection of antimicrobial medicines, giving reasons, examples and/or evidence to support the points made (AC2.5).

Learning outcome 3: Understand the uses of commonly available immunological products

An example of a suitable assignment to cover this learning outcome could be an 'at a glance' advice sheet for pharmacy staff. The advice sheet could be set out in a chart style, with boxes containing the following information:

- general principles of vaccination – vaccination and immune response, reasons for immunisation, immunisation schedule, immunisation of high-risk groups, immunisation procedures for international travel and immunisation procedures in the event of pandemics

- use of vaccinations – UK vaccination schedule, diseases covered and their symptoms, reasons for vaccination, vaccines and antisera available and limitations for the use of each against disease; this box should also include the care of vaccines – records, storage, transport, disposal and cold chain

- care of immunological products – records, storage, transport, disposal and cold chain. Examples of best practice and workplace policies will need to be briefly described here

- immunoglobulins – normal immunoglobulins, specific immunoglobulins, anti-D immunoglobulin availability and reasons for use needs to be discussed in this final section.

Reasons, examples and credible evidence will need to be included to support all points made.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 provide details of the general principles of vaccination, giving reasons, examples and/or evidence to support the points made (AC3.1)

2 provide details of the use of vaccines, giving reasons, examples and/or evidence to support the points made (AC3.2)

3 provide details of the care of immunological products, giving reasons, examples and/or evidence to support the points made (AC3.3)

4 provide details of the use of immunoglobins, giving reasons, examples and/or evidence to support the points made (AC3.4).

Learning outcome 4: Understand the advice individuals need to manage their health

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet focusing on **four** different infections chosen from those addressed in learning outcome 2: one bacterial, one viral, one fungal and one protozoal. For each of the four infections, information will need to be provided on the relevant medicines, including dosage, frequency, storage, care, non-compliance, relevant contraindications and any other appropriate information (e.g. take medicine with food), prophylaxis and resistance. The final section of the leaflet will need to focus on advice for individuals to help manage their own health and should include vaccinations; infections; treatment pathways, self-care, self-monitoring, signposting to information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines and changes to lifestyle. Reasons, examples and credible evidence are to be included to support all points made.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the information that must be given to individuals about their medicines, giving reasons and examples to support the points made (AC4.1)

2   provide details of the information that must be given to the individuals about the management of their health, giving reasons and examples to support the points made (AC4.2).

Textbooks

Bain B – *A Beginner's Guide to Blood Cells*, 3rd edition (Wiley Blackwell, 2017)
ISBN 9781119367734

Bennett P, Brown M – *Clinical Pharmacology*,12th edition (Elsevier, 2018)
ISBN 9780702073281

Clendon J, Munns A – *Community Health and Wellness: Primary Health Care in Practice*,
5th edition (Churchill Livingstone, 2015) ISBN 9780729541756

Denyer S, Hodges N, Gorman S, Gilmore B (editors) – *Hugo and Russell's Pharmaceutical Microbiology*, 8th edition (Wiley, 2011) ISBN 9781444330632

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition
(Dorling Kindersley, 2018) ISBN 9780241317617

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition
(Pharmaceutical Press, 2002) ISBN 9780853695073

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Naidoo J, Wills J – *Foundations for Health Promotion*, 4th edition
(Public Health and Health Promotion) (Elsevier, 2016) ISBN 9780702054426

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015)
ISBN 9781118902400

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition
(Elsevier, 2019) ISBN 9780702074486

Roberts A – *The Complete Human Body: The Definitive Visual Guide*, 2nd edition
(Dorling Kindersley, 2016) ISBN 9780241240458

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*,
5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition (Elsevier, 2018)
ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition
(Elsevier, 2018) ISBN 9780323476522

Wilson J – *Infection Control in Clinical Practice*, 4th edition (Bailliere Tindall, 2012)
ISBN 9780702049569

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*,
18th edition (Mosby, 2019) ISBN 9780323554732

Journals

Journal of Pharmacy and Pharmacology – www.onlinelibrary.wiley.com/journal/20427158

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases

Pharmaceutical Journal – www.rpharms.com/publications/pharmaceutical-journal

Websites

www.gov.uk/government/organisations/public-health-england	Public Health England
www.hps.scot.nhs.uk/	Health Protection Scotland
www.publichealth.ie/	Public Health Ireland
www.publichealthwales.wales.nhs.uk/	Public Health Wales

Unit 19: Medicinal Treatments for Endocrine, Gynaecological and Genitourinary Conditions

Level: 3

Credit value: 6

Guided Learning Hours: 40

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of the endocrine, lymphatic and genitourinary systems and the medicines that are used to treat and manage them. Apprentices will acquire the knowledge that a Pharmacy Technician needs in order to provide advice to individuals for effective management and treatment of associated conditions.

In this unit, you will have the opportunity to study a range of body systems and associated medicines to enhance your role. To begin, you will learn about the structure and function of both the endocrine and lymphatic systems, before moving on to the genitourinary system. Here you will study the structure of the urinary system and how it regulates body fluids. You will then explore the structure and function of the male and female reproductive systems, fertilisation, stages of development and birth.

Linking all this knowledge to your role as a Pharmacy Technician, you will study common conditions affecting these body systems and the medicines used to treat them, including common side effects. Finally, you will gain the knowledge required to provide individuals with essential information on the medicines they take, as well as how to manage their own health.

It is recommended that apprentices do not attempt this unit until they have completed the first learning outcome from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions*. Learning outcome 1 from Unit 14 ('Understand different types of human cells and tissue') provides a basis for much of the knowledge and understanding in this unit.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the lymphatic system	1.1	Describe the **structure** of the lymphatic system	**Structure**: lymphatic vessels, lymph nodes, spleen
		1.2	Explain how the structure of the lymphatic system works to achieve its **function**	**Function**: the physiology and pathology relating to drainage of tissue fluid and formation of lymph
2	Understand the endocrine system	2.1	Describe the **structure** of the endocrine system	**Structure**: hypothalamus, pituitary gland, thyroid, parathyroid, pancreas, adrenal medulla, adrenal cortex, gonads
		2.2	Explain how the structure of the endocrine system works to achieve its **function**	**Function**: the physiology and pathology relating to the production of hormones, secretion of hormones, regulating the metabolism, homeostasis and endocrine control and feedback

Learning outcomes		Assessment criteria		Content
3	Understand the genitourinary system	3.1	Describe the **structure of the urinary system**	**Structure of the urinary system**: kidneys, nephron, ureters, urethras, bladder
		3.2	Explain how the structure of the urinary system assists the **regulation** of body fluids	**Regulation**: the physiology and pathology relating to filtration, absorption, urine production, storage and release, electrolyte and pH balance
		3.3	Describe the **structure of the reproductive system**	**Structure of the reproductive system**:
				Male: testis, epididymis, scrotum, sperm, duct, penis, accessory glands
		3.4	Explain how the structure of reproductive system supports its **function**	*Female*: ovary, oviducts, uterus, vagina, external genitalia, mammary glands
		3.5	Describe foetal **development**	**Function**: the physiology and pathology relating to how the production of gametes, hormonal regulation of sperm production in males, female ovarian and menstrual cycles, fertilisation, pregnancy, birth, lactation
				Foetal development: fertilisation, stages of development (trimesters), birth

Learning outcomes		Assessment criteria		Content
4	Understand how medicines are used in the treatment of endocrine conditions	4.1	Describe **common conditions** affecting the endocrine system	**Common conditions**:
				Thyroid: hypothyroidism, hyperthyroidism
		4.2	Explain how **common medicines** are used in the treatment of endocrine conditions	*Pancreas*: diabetes, hypoglycaemia, pancreatitis
				Sex hormones: excess and deficiency, oestrogen; progesterone; menopause, hormone replacement therapy, male sex hormones and antagonists
		4.3	Explain the reasons why **common side effects** may occur with medicines used to treat endocrine conditions	*Hypothalamic and pituitary*: adrenal insufficiency, Cushing's syndrome, Addison's disease
				Infertility
				Common medicines: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
				Common side effects: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
5	Understand how medicines are used in the treatment of gynaecological conditions	5.1	Describe **common conditions** of the gynaecological system	**Common conditions**: menorrhagia, polycystic ovary syndrome (PCO), fibroids, pelvic inflammatory disease (PID), endometriosis, infertility
		5.2	Explain how **common medicines** are used in the treatment of gynaecological conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		5.3	Explain the reasons why **common side effects** may occur with medicines used to treat gynaecological conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
6	Understand how medicines are used in the treatment of genitourinary conditions	6.1	Describe **common conditions** affecting the genitourinary system	**Genitourinary system**: urinary retention: urinary incontinence and nocturnal enuresis, benign prostatic hyperplasia (BPH), erectile dysfunction. Infections of the genitalia: sexually transmitted diseases, bacterial vaginosis (BV)
		6.2	Explain how **common medicines** are used in the treatment of genitourinary conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines for the conditions listed including agents and their actions, benefits and limitations and contraindications
		6.3	Explain the reasons why **common side effects** may occur with medicines used to treat of genitourinary conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
7	Understand how medicines are used in obstetrics	7.1	Explain how medicines are used in **obstetrics**	**Obstetrics**: termination of pregnancy, induction of labour, management of complications of labour, pre-eclampsia and eclampsia
		7.2	Describe the **main methods of contraception**	**Main methods of contraception**: hormonal (combined, progestogen-only), spermicidal contraceptives, intra-uterine devices (IUD), intra-uterine systems (IUS), emergency contraception (hormonal and IUD)
				Use, limitations and side effects
				Refer to current edition of British National Formulary (BNF) for common drug treatments, devices and barrier methods of contraception

Learning outcomes		Assessment criteria		Content
8	Understand the advice individuals need to manage their **conditions**	8.1	Explain the **information** that must be given to individuals about their medicines	**Conditions**: endocrine; gynaecological; genitourinary
		8.2	Explain the information that must be given to individuals about the **management of their condition**	**Information**: dosage, frequency, storage, care, non-compliance, relevant contraindications and any other appropriate information, e.g. take medicine with food
				Management of their condition: treatment pathways, self-care, self-monitoring, signposting to other information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicine, changes to lifestyle

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to computers and to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Apprentices are required to cover **all** the content and:

for AC4.1 at least **one** item of content highlighted in **bold** and **two** items of content highlighted in **italics** must be covered in assessment.

Thyroid: hypothyroidism, hyperthyroidism.

Pancreas: diabetes, hypoglycaemia, pancreatitis.

Sex hormones: excess and deficiency, oestrogen; progesterone; menopause, hormone replacement therapy, male sex hormones and antagonists.

Hypothalamic and pituitary: adrenal insufficiency, Cushing's syndrome Addison's disease.

Tumours of endocrine glands.

Infertility.

for AC5.1 apprentices **must** describe menorrhagia plus one other condition

for AC6.1 and AC6.2 apprentices **must** describe erectile dysfunction, chlamydia plus one other condition.

An example of a suitable assignment to cover all of the learning outcomes in this unit could be presentation slides for pharmacy staff, including all of the information required below, with a delivery time of approximately 15 minutes – though there is no need for apprentices to deliver the presentation. Graphical images should be used, but these will need to be supported by explanatory text/narrative. It is essential that relevant examples are used and that credible evidence is utilised to support all points made. The apprentice may wish to order the slides in the presentation differently from the order of the learning outcomes – for example, learning outcome 4 could follow immediately after learning outcome 2 and learning outcome 6 could follow immediately after learning outcome 3. For ease of reference by the assessor, it is advisable that each slide indicates the number of the learning outcome that the information relates to.

Learning outcome 1: Understand the lymphatic system

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the structure of the lymphatic system, using their own words and including all the relevant information (AC1.1)

2   provide details of how the structure of the lymphatic system works to achieve its function, giving reasons and examples to support the points made (AC1.2).

Learning outcome 2: Understand the endocrine system

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the structure of the endocrine system, using their own words and including all the relevant information (AC2.1)

2   provide details of how the structure of the endocrine system works to achieve its function, giving reasons and examples to support the points made (AC2.2).

Learning outcome 3: Understand the genitourinary system

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the structure of the urinary system, using their own words and including all the relevant information (AC3.1)

2   provide details of how the structure of the urinary system assists the regulation of body fluids, giving reasons and examples to support the points made (AC3.2)

3   give a clear account of the structure of the reproductive system, using their own words and including all the relevant information (AC3.3)

4   provide details of how the structure of reproductive system supports its function, giving reasons and examples to support the points made (AC3.4)

5   give a clear account of foetal development, using their own words and including all the relevant information (AC3.5).

Learning outcome 4: Understand how medicines are used in the treatment of endocrine conditions

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account, using their own words and including all the relevant information, of the following common conditions affecting the endocrine system:

   o   **at least one** from

      –   thyroid: hypothyroidism, hyperthyroidism

      –   pancreas: diabetes, hypoglycaemia, pancreatitis

   o   **at least two** from

      –   sex hormones: excess and deficiency, oestrogen; progesterone; menopause, hormone replacement therapy, male sex hormones and antagonists

      –   hypothalamic and pituitary: adrenal insufficiency, Cushing's syndrome Addison's disease

      –   tumours of endocrine glands

      –   infertility (AC4.1)

2   provide details of how common medicines are used in the treatment of the endocrine conditions described under AC4.1, giving reasons, examples and/or evidence to support the points made (AC4.2)

3   give reasons why common side effects may occur with the medicines used to treat the endocrine conditions described under AC4.1, using examples and/or evidence to support the points made (AC4.3).

Learning outcome 5: Understand how medicines are used in the treatment of gynaecological conditions

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account, using their own words and including all the relevant information, of menorrhagia plus **one other** common condition of the gynaecological system (AC5.1)

2 provide details of how common medicines are used in the treatment of the gynaecological conditions described under AC5.1, giving reasons, examples and/or evidence to support the points made (AC5.2)

3 give reasons why common side effects may occur with the medicines used to treat the gynaecological conditions described under AC5.1, using examples and/or evidence to support the points made (AC5.3).

Learning outcome 6: Understand how medicines are used in the treatment of genitourinary conditions

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 give a clear account, using their own words and including all the relevant information, of **three** common conditions affecting the genitourinary system, to include erectile dysfunction, chlamydia plus **one other** condition (AC6.1)

2 provide details of how common medicines are used in the treatment of the genitourinary conditions described under AC6.1, giving reasons, examples and/or evidence to support the points made (AC6.2)

3 give reasons why common side effects may occur with the medicines used to treat the genitourinary conditions described under AC6.1, using examples and/or evidence to support the points made (AC6.3).

Learning outcome 7: Understand how medicines are used in obstetrics

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of how medicines are used in **three** different scenarios in obstetrics, giving reasons, examples and/or evidence to support the points made (AC7.1)

2   give a clear account of the main methods of contraception, using their own words and including all the relevant information (AC7.2).

Learning outcome 8: Understand the advice individuals need to manage their conditions

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the information that must be given to individuals about their medicines, giving reasons and examples to support the points made (AC8.1)

2   provide details of the information that must be given to individuals about the management of their condition, giving reasons and examples to support the points made (AC8.2).

Textbooks

Bennett P, Brown M – *Clinical Pharmacology*,12th edition (Elsevier, 2018) ISBN 9780702073281

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition (Dorling Kindersley, 2018) ISBN 9780241317617

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition (Pharmaceutical Press, 2002) ISBN 9780853695073

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015) ISBN 9781118902400

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition (Elsevier, 2019) ISBN 9780702074486

Roberts A – *The Complete Human Body: The Definitive Visual Guide*, 2nd edition (Dorling Kindersley, 2016) ISBN 9780241240458

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*, 5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition (Elsevier, 2018) ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition (Elsevier, 2018) ISBN 9780323476522

White B, Porterfield S – *Endocrine and Reproductive Physiology* (Mosby Physiology Monograph Series with Student Consult Online Access), 4th edition (Mosby, 2012) ISBN 9780323087049

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*, 18th edition (Mosby, 2019) ISBN 9780323554732

Journals

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases

Pharmaceutical Journal – www.rpharms.com/publications/pharmaceutical-journal

Websites

www.bnf.org/products/bnf-online/	BNF online services
www.nhs.uk/	Public health information service

Unit 20: Medicinal Treatments for Sensory Organ Conditions

Level: 3

Credit value: 5

Guided Learning Hours: 30

Unit summary

The aim of this unit is for pre-registration trainee Pharmacy Technicians to develop knowledge and understanding of the sensory organs and the medicines used to treat related medical conditions. Apprentices will acquire the knowledge that a Pharmacy Technician needs in order to provide advice to individuals for effective management and treatment of associated conditions.

In this unit, you will study the structure and function of the sensory organs: eyes, ears, mouth, nose and skin. You will explore the common conditions and diseases, such as glaucoma, otitis media, gingivitis, rhinitis and eczema, related to each of these organs. You will learn about the medicines used to treat these conditions and the common side effects of the medicines. You will then have the opportunity to translate this knowledge into credible advice for individuals in the community.

It is recommended that apprentices do not attempt this unit until they have completed the first learning outcome from *Unit 14: Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions*. Learning outcome 1 from Unit 14 ('Understand different types of human cells and tissue') provides a basis for much of the knowledge and understanding in this unit.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand sensory organs	1.1	Describe the **structure** of the body's sensory organs	**Sensory organs**: eyes, ears, mouth, nose, skin **Function**: the physiology and pathology relating to how sensory organs function
		1.2	Explain how the structure of each sensory organ relates to its **function**	
2	Understand how medicines are used in the treatment of eye conditions	2.1	Describe **common conditions and diseases** affecting the eye	**Common conditions and diseases**: glaucoma (closed and open angled, steroid induced), conjunctivitis (infective and allergenic), tear deficiency (tired or dry eyes), inflammatory disorders, blepharitis, scleritis, stye, 'red eye'
		2.2	Explain how **common medicines** are used in the treatment of eye conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		2.3	Explain the reasons why **common side effects** may occur with medicines used to treat eye conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
3	Understand how medicines are used in the treatment of ear conditions	3.1	Describe **common conditions** affecting the ear	**Common conditions**: otitis externa, otitis media, ear wax, labyrinth disorders
		3.2	Explain how **common medicines** are used in the treatment of ear conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		3.3	Explain the reasons why **common side effects** may occur with medicines used to treat ear conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
4	Understand how medicines are used in the treatment of oropharynx conditions	4.1	Describe **common conditions** of the oropharynx	**Common conditions**: gingivitis, mouth ulcer, sore throat (viral / bacterial), herpes
		4.2	Explain how **common medicines** are used in the treatment of oropharynx conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		4.3	Explain the reasons why **common side effects** may occur with medicines used to treat oropharynx conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
5	Understand how medicines are used in the treatment of nose conditions	5.1	Describe **common conditions** of the nose	**Common conditions**: rhinitis (including allergic), nasal congestion, staphylococcal infections
		5.2	Explain how **common medicines** are used in the treatment of nose conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		5.3	Explain the reasons why **common side effects** may occur with medicines used to treat nose conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
6	Understand how medicines are used in the treatment of dermatological conditions	6.1	Describe **common dermatological conditions**	**Common dermatological disorders**: eczema (including infected), psoriasis, acne, rosacea, dandruff, fungal infections (e.g. athlete's foot, onychomycosis, ringworm), infestations (e.g. lice, scabies), warts, verrucas, allergic rashes, bacterial infections (e.g. impetigo)
		6.2	Explain how **common medicines** are used in the treatment of dermatological conditions	**Common medicines**: refer to the current edition of the British National Formulary (BNF) and other reliable sources for details of common medicines including agents and their actions, benefits and limitations and contraindications for the conditions listed
		6.3	Explain the reasons why **common side effects** may occur with medicines used to treat dermatological conditions	**Common side effects**: refer to current edition of British National Formulary (BNF) for common medicines and treatments for the conditions listed

Learning outcomes		Assessment criteria		Content
7	Understand the advice individuals need to manage their **condition**	7.1	Explain the **information** that must be given to the individual about their medicines	**Condition**: eye; ear, oropharynx; nose; dermatological
		7.2	Explain the information that must be given to the individual about the **management of their condition**	**Information**: dosage, frequency, storage, care, non-compliance, relevant contraindications and any other appropriate information, e.g. take medicine with food
				Management of their condition: treatment pathways, self-care, self-monitoring, signposting to other information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines, changes to lifestyle

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this qualification will need access to a pharmacy, a registered pharmacist and other members of the pharmacy team to act as supervisors or mentors. These are part of the requirements for registration with the General Pharmaceutical Council.

Staff delivering this unit should be occupationally competent and registered with the General Pharmaceutical Council. They should have recent experience of pharmacy practice and be able to demonstrate evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a library with a range of relevant books, journals and electronic resources.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Apprentices are required to cover **all** the content and:

- for AC2.1, **glaucoma** (closed and open angled, steroid induced), *conjunctivitis* (infective and allergenic), *tear deficiency* (tired or dry eyes), *inflammatory disorders*, *scleritis*, stye, 'red eye'

- for AC3.1, *otitis externa*, **otitis media**, *ear wax*, *labyrinth disorders*.

- for AC4.1, *gingivitis*, **mouth ulcer**, *sore throat (viral/bacterial), herpes*

- for AC5.1, *rhinitis (including allergic)*, **nasal congestion**, *staphylococcal infections*

- for AC6.1, **eczema** (including infected), *psoriasis, acne, rosacea*, dandruff, *fungal infections (e.g. athlete's foot, onychomycosis, ringworm), infestations (e.g. lice, scabies), warts, verrucas, allergic rashes, bacterial infections (e.g. impetigo).*

All content highlighted in **bold** and at least **one** item from the content highlighted in *italics* must be covered in assessment.

Learning outcome 1: Understand sensory organs

An example of a suitable assignment to cover this learning outcome could be an information leaflet to be displayed in the pharmacy. The leaflet should contain clear illustrations that depict the structure of each sensory organ, accompanied by explanatory text outlining their functions. Credible references will be required to support all material.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of the structure of the body's sensory organs, using their own words and including all the relevant information (AC1.1)

2   provide details of how the structure of each sensory organ relates to its function, giving reasons and examples to support the points made (AC1.2).

Learning outcome 2: Understand how medicines are used in the treatment of eye conditions

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet explaining glaucoma and one other condition/disease of the eye. Apprentices will need to give details of the medicines commonly used to treat these conditions, including side effects that may occur. Credible references are required to support all material, along with relevant examples from practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account, using their own words and including all the relevant information, of **two** common conditions/diseases affecting the eye. This must include glaucoma (closed and open angled, steroid induced) and **one** from: conjunctivitis (infective and allergenic); tear deficiency (tired or dry eyes); inflammatory disorders; scleritis. (AC2.1)

2   provide details of how common medicines are used in the treatment of the eye conditions described under AC2.1, giving reasons, examples and/or evidence to support the points made (AC2.2)

3   give reasons why common side effects may occur with the medicines used to treat the eye conditions described under AC2.1, using examples and/or evidence to support the points made (AC2.3).

Learning outcome 3: Understand how medicines are used in the treatment of ear conditions

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet that explains otitis media and one other condition/disease of the ear. Apprentices will need to give details of the medicines commonly used to treat these conditions, including the side effects that may occur. Credible references are required to support all material along with relevant examples from practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account, using their own words and including all the relevant information, of **two** common conditions affecting the ear. This must include otitis media and **one** from: otitis externa; ear wax; labyrinth disorders (AC3.1)

2   provide details of how common medicines are used in the treatment of the ear conditions described under AC3.1, giving reasons, examples and/or evidence to support the points made (AC3.2)

3   give reasons why common side effects may occur with the medicines used to treat the ear conditions described under AC3.1, using examples and/or evidence to support the points made (AC3.3).

Learning outcome 4: Understand how medicines are used in the treatment of oropharynx conditions

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet that explains mouth ulcers and one other condition/disease of the mouth. Apprentices will need to give details of the medicines commonly used to treat these conditions, including side effects that may occur. Credible references are required to support all material along with relevant examples from practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account, using their own words and including all the relevant information, of **two** common conditions of the oropharynx. This must include mouth ulcer and **one** from: gingivitis; sore throat (viral/bacterial); herpes (AC4.1)

2   provide details of how common medicines are used in the treatment of the oropharynx conditions described under AC4.1, giving reasons, examples and/or evidence to support the points made (AC4.2)

3   give reasons why common side effects may occur with the medicines used to treat the oropharynx conditions described under AC4.1, using examples and/or evidence to support the points made (AC4.3).

Learning outcome 5: Understand how medicines are used in the treatment of nose conditions

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet that explains nasal congestion and one other condition/disease of the nose. Apprentices will need to give details of the medicines commonly used to treat these conditions, including side effects that may occur. Credible references are required to support all material along with relevant examples from practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account, using their own words and including all the relevant information, of **two** common conditions of the nose. This must include nasal congestion and **one** from: rhinitis (including allergic); staphylococcal infections (AC5.1)

2   provide details of how common medicines are used in the treatment of the nose conditions described under AC5.1, giving reasons, examples and/or evidence to support the points made (AC5.2)

3   give reasons why common side effects may occur with the medicines used to treat the nose conditions described under AC5.1, using examples and/or evidence to support the points made (AC5.3).

Learning outcome 6: Understand how medicines are used in the treatment of dermatological conditions

An example of a suitable assignment to cover this learning outcome could be a patient information leaflet that explains eczema and one other condition/disease of the skin. Apprentices will need to give details of the medicines commonly used to treat these conditions, including side effects that may occur. Credible references are required to support all material along with relevant examples from practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account, using their own words and including all the relevant information, of **four** common dermatological conditions. This must include eczema (including infected) and **three** from: psoriasis; acne; rosacea; fungal infections (e.g. athlete's foot, onychomycosis, ringworm); infestations (e.g. lice, scabies); warts; verrucae; allergic rashes; bacterial infections (e.g. impetigo) (AC6.1)

2   provide details of how common medicines are used in the treatment of the dermatological conditions described under AC6.1, giving reasons, examples and/or evidence to support the points made (AC6.2)

3   give reasons why common side effects may occur with the medicines used to treat the dermatological conditions described under AC6.1, using examples and/or evidence to support the points made (AC6.3).

Learning outcome 7: Understand the advice individuals need to manage their condition

An example of a suitable assignment to cover this learning outcome could be a leaflet providing information to individuals related to their medicines (only medicines referenced in the previous learning outcomes for this unit need be included). The leaflet will need to include details of dosage, frequency, storage, care, non-compliance, relevant contraindications and any other appropriate information (e.g. take medicine with food).

The following section will need to describe how individuals might manage their condition, such as treatment pathways, self-care, self-monitoring, signposting to other information, resources and organisations, attendance at regular health checks, understanding actions of different prescribed medicines and changes to lifestyle.

Credible references will be required to support all material, along with relevant examples from practice.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1 provide details of the information that must be given to the individual about their medicines, giving reasons and examples to support the points made (AC7.1)

2 provide details of the information that must be given to the individual about the management of their condition, giving reasons and examples to support the points made (AC7.2).

Textbooks

Bennett P, Brown M – *Clinical Pharmacology*,12th edition (Elsevier, 2018) ISBN 9780702073281

Dorling Kindersley – *BMA New Guide to Medicines and Drugs*, 10th edition (Dorling Kindersley, 2018) ISBN 9780241317617

Harman R and Mason P (editors) – *Handbook of Pharmacy Healthcare*, 2nd edition (Pharmaceutical Press, 2002) ISBN 9780853695073

Janson Cohen B, Hull K – *Memmler's The Human Body in Health and Disease*, 14th edition (Lippincott Williams and Wilkins, 2018) ISBN 9781496380500

McGavock H – *How Drugs Work*, 4th edition (CRC Press, 2015) ISBN 9781785230776

Neal M – *Medical Pharmacology at a Glance*, 8th edition (Wiley-Blackwell, 2015) ISBN 9781118902400

Rang H, Dale M, Ritter J, Flower R et al – *Rang & Dale's Pharmacology*, 9th edition (Elsevier, 2019) ISBN 9780702074486

Roberts A – *The Complete Human Body: The Definitive Visual Guide*, 2nd edition (Dorling Kindersley, 2016) ISBN 9780241240458

Stringer J – *Basic Concepts in Pharmacology: What You Need to Know for Each Drug Class*, 5th edition (McGraw-Hill, 2017) ISBN 9781259861079

Walker R, Whittlesea C – *Clinical Pharmacy and Therapeutics*, 6th edition (Elsevier, 2018) ISBN 9780702070129

Wecker L – *Brody's Human Pharmacology: Mechanism-Based Therapeutics*, 6th edition (Elsevier, 2018) ISBN 9780323476522

Willihnganz M, Gurevitz S, Clayton B – *Clayton's Basic Pharmacology for Nurses*, 18th edition (Mosby, 2019) ISBN 9780323554732

Journals

Live Science – www.livescience.com/60752-human-senses.html

MIMS (Monthly Index of Medical Specialities) (Haymarket Group, published monthly)

NICE journals and databases – www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases

Pharmaceutical Journal – www.rpharms.com/publications/pharmaceutical-journal

Websites

www.bnf.org/products/bnf-online/   British National Formulary online services

www.nhs.uk/   Public health information service

Unit 21:   Principles of Safe Manufacture of Quality Medicines in the Pharmaceutical Environment

Level: 3

Credit value: 10

Guided Learning Hours: 70

Unit summary

The aim of this unit is to provide pre-registration trainee Pharmacy Technicians with the knowledge and understanding to be able to work safely in the pharmaceutical manufacturing environment. It is important that Pharmacy Technicians can calculate formulae and have an awareness of a range of techniques used to produce safe and accurate products.

This unit is designed to give apprentices an insight into the complex and varied aspects of the work involved in medicines preparation and manufacture. You will consider the preparation and manufacture of medicines in order to develop an understanding of the need to work in a systematic and auditable way according to Standard Operating Procedures. The unit also covers the principles behind quality assurance of medicines. The unit aims to provide you with an appreciation of pharmaceutical and other factors that can result in inaccuracy and poor-quality medicines and understand the harm that could result to the health of individuals.

In this unit, you will develop your understanding of the legislation and Standard Operating Procedures that govern all areas relating to the preparation and manufacture of medicines, and those governing clinical trials.

Accuracy and adherence to procedures are central to your work as a Pharmacy Technician. You will gain an understanding of the different types of manufacturing and a range of environments for pharmaceutical manufacture, with their individual requirements. You will understand the importance of hygiene and the sources of different types of contamination and the potential consequences linked to these areas.

You will also explore the different types of documentation required in each of the manufacturing environments for all the different processes to ensure that a valid audit trail is maintained.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Content
1	Understand the governance requirements for the manufacture of pharmaceutical products	1.1	Explain why pharmaceutical preparation and manufacture is highly controlled by **legislation and standards**	**Legislation and standards**: Medicines Act 1968; Human Medicines Regulations 2012; licensing and requirements process; EU Directive on Good Manufacturing Practice for Human Medicinal Products; Rules and Guidance for Pharmaceutical Manufacturers and Distributors and current appendices there of (Orange guide); Quality Assurance of Aseptic Preparation Services (current edition) EL(97) 52; Good Distribution Practice; Good Automated Manufacturing Practice (GAMP)
		1.2	Explain how legislation governs the manufacture and supply of **clinical trial materials**	
		1.3	Outline the roles and responsibilities of **key personnel** in pharmaceutical preparation and manufacture	
		1.4	Explain why it is important to have a robust recording system in pharmacy preparation and manufacturing	**Clinical trial**: purpose, design of trials; different types of trials; phases of trials, good clinical practice (GCP) and clinical trials regulation; protection of the public; Investigational Medicinal Products (IMPs)
		1.5	Explain the difference between **preparation and manufacture**	
		1.6	Describe the use of **documentation** in the preparation and manufacture of medicines	*Continued on next page*

Learning outcomes	Assessment criteria	Content
		Continued from previous page
		Key personnel: roles and responsibilities of Qualified Person (QP); production manager; Quality Assurance (QA) Manager; Regional QA Officer; quality controller; Accountable Pharmacist; Authorised Pharmacist; accredited product approver
		Preparation and manufacture: non-sterile; extemporane`ous products; sterile and aseptic; large batch production: scaling up of quantities; scaling up of methods of manufacture; scaling up of packaging and transport operations
		Documentation: certificates of analysis and conformity; data integrity; documentation and system control in pharmacy manufacturing: Local Standard Operating Procedures; working procedure manuals, batch worksheets or records and associated documents; storage, distribution and transport of pharmaceutical products; dispensing units

Learning outcomes		Assessment criteria		Content
2	Understand the importance of maintaining environments for pharmaceutical manufacture in relation to **Good Manufacturing Practice (GMP)**	2.1	Explain why **different environments** are used for pharmaceutical manufacturing	**Good Manufacturing Practice** applied in preparation and manufacturing areas; preparation versus manufacturing: the difference between extemporaneous and named patient dispensing items and licensed manufacturing; how this is implemented in the workplace
		2.2	Explain the importance of **hygiene** in pharmaceutical manufacture	
		2.3	Explain the importance of the following in the manufacture of pharmaceutical products: • process design • workflow	**Different environments** must include: classification of cleanrooms and support rooms; classification of isolators; air handling units; High Efficient Particulate Air (HEPA) filters; essential requirements for sterile, non-sterile and aseptically prepared products in the manufacturing environment, fabric and fittings of buildings, layout of preparation areas
		2.4	Discuss the different **sources of contamination** which could be present in a manufacturing environment	**Hygiene** and its potential effects on environment, products and therefore safety of individuals
		2.5	Explain the **potential consequences** of different sources of contamination within pharmaceutical manufacturing	**Sources of contamination**: particles; microorganisms; chemical/cross contamination
		2.6	Describe the importance of **planned preventative maintenance** in pharmaceutical manufacturing	**Potential consequences**: failed batches; harm to individuals; waste; cost; delay to treatment; reputation
				Planned preventative maintenance: use and scheduled maintenance to premises and equipment

Learning outcomes	Assessment criteria		Content
	2.7	Describe the procedures for **preparing the environment** for the manufacture of medicines	**Preparing the environment**: environmental monitoring and recording of results in relation to: product quality; safe parameters of the clean room; cleaning; changing procedures
	2.8	Explain the difference between sterile, non-sterile and aseptic techniques in the manufacturing of pharmaceutical products	

Learning outcomes		Assessment criteria		Content
3	Understand how medicines are manufactured	3.1	Describe the different **types of pharmaceutical products**	**Types of pharmaceutical products**: eye drops, injections; antibiotic reconstitutions; cytotoxic products; monoclonal antibodies (MABs), advanced therapy medicinal product (ATMP); parenteral nutrition (PN); radiopharmaceutical products; CIVAS (Centralised Intravenous Additive Service); syringe drivers; gene therapy, radiopharmacy; extemporaneous products
		3.2	Describe different **pharmaceutical manufacturing techniques**	
		3.3	Explain the use of different **equipment** in the manufacturing environment	
		3.4	Outline the governance in relation to the principles of **labelling and packaging**	**Pharmaceutical manufacturing techniques**: mixing; size reduction; doubling up; filtration; asepsis
		3.5	Explain the importance of correctly **labelling and packaging** pharmaceutical products	**Equipment**: practical use of autoclaves, stills, mixing equipment, filling and sealing equipment, pumps, unidirectional air flow and isolator cabinets, filters
		3.6	Describe the different methods of sterilisation	**Labelling and packing**: in line with legislation

Learning outcomes		Assessment criteria		Content
4	Understand how to perform calculations for pharmaceutical formulae	4.1	Explain the importance of performing accurate **calculations**	**Calculations** for: weights; volumes; percentages; ratios; dilutions; displacement values; small quantity calculations; concentration; use of formulae for extemporaneous dispensing
		4.2	Explain how to calculate accurate **dosages and quantities** for individuals in accordance with prescriptions	**Dosages and quantities** for individuals based on: age, weight, surface area and blood volume; quantity of medicine based on number of prescribed doses and time intervals
5	Understand the principles of pharmaceutical quality systems in the manufacture of pharmaceutical products	5.1	Explain the role of the following in **pharmaceutical quality systems**: • **quality assurance** • **quality control**	**Pharmaceutical quality systems** (PQS): implementation of quality management; philosophy or operations management; process control, process validation, personal validation, product definition, specifications, safe systems, corrective and preventative actions (CAPA), continuous improvement record keeping; health and safety reporting procedures; validation, e.g. broth and process validation *Continued on next page*
		5.2	Describe how manufactured products are tested for quality	
		5.3	Describe **types of validation** that are carried out in pharmaceutical manufacturing	
		5.4	Discuss safe systems and error reduction strategies in the context of medicines manufacture	

Learning outcomes		Assessment criteria		Content
		5.5	Describe different **audit processes** in: • licensed units • unlicensed units	*Continued from previous page* **Quality assurance**: standards in the dispensing or manufacturing process, master formulae and worksheets, official standards relating to containers, raw materials and finished products, quality and product specifications; product contamination by personnel, environment and personnel monitoring; shelf life and stability testing; statutory requirements on quality of pharmaceutical raw materials and formulated products; packaging, labelling and quarantine of completed products, release procedure; batch reconciliation and product recall procedures; quality assurance issues particular to large-scale production manufacture **Quality control**: contamination or impurities in pharmaceutical materials and formulated products, their sources and control; in-process testing, degradation of pharmaceutical products; chemical analysis of raw materials and final products; reasons for product sampling and reliability, sterility and pyrogen testing *Continued on next page*

Learning outcomes	Assessment criteria	Content
		Continued from previous page
		Types of validation: operator validation; process validation; change validation; transfer validation
		Audit processes: Medicines and Healthcare Products Regulatory Agency (MHRA); EL(97)52 Aseptic Dispensing in NHS Hospitals

Essential information for tutors and assessors

Essential resources

Apprentices undertaking this unit will require access to a pharmacy fulfilling the requirements of the General Pharmaceutical Council. Apprentices undertaking this qualification as part of the requirements for registration with the General Pharmaceutical Council should have access to a registered pharmacist and, if possible, other members of the pharmacy team to act as support or mentors. All health and safety requirements must be met.

Staff delivering this unit should be competent, experienced and registered with the General Pharmaceutical Council. They should have current experience of pharmacy practice and show evidence of continuing professional development in order to maintain their registration with the General Pharmaceutical Council. Exceptions to the requirement for registration with the General Pharmaceutical Council may apply in Northern Ireland.

Apprentices will need access to a range of resources including Standard Operating Procedures, relevant books, journals and websites.

Ideally, apprentices will be able to experience working within a manufacturing unit or be given the opportunity to visit one.

Assessment

This unit is internally assessed. To pass this unit, the evidence that the apprentice presents for assessment must demonstrate that they have met the required standard specified in the learning outcomes and assessment criteria.

The assessment for this unit should draw on learning from the unit and be designed in a way that enables apprentices to meet all the assessment criteria.

Centres are free to choose their own forms of written evidence for this unit as long as they enable apprentices to produce suitable and sufficient evidence to meet the stated standard of the assessment criteria and achieve the learning outcomes. Regardless of the source of evidence used, apprentices will need to meet the standards stated below for each learning outcome.

Unit assessment requirements

This unit must be assessed in line with the *Skills for Health Assessment Principles* and the Pearson qualification assessment strategy.

Learning outcome 1: Understand the governance requirements for the manufacture of pharmaceutical products

An example of a suitable assignment to cover this learning outcome could be a report that reviews the legislation and guidelines relating to pharmacy manufacturing and aseptic processing. Apprentices will need to name and explain examples of at least six pieces of legislation or guidelines that govern the manufacture of pharmaceutical products, and then discuss how they are applied in practice and why pharmaceutical manufacturing is so highly controlled. Apprentices could also reference specific legislation such as radiation protection when preparing radiopharmaceuticals.

The following will need to be included in the report:

- relevant UK and European legislation and guidelines (including a clear explanation of the difference between preparation and manufacturing)

- clinical trials legislation (including a flow chart to show stages and phases; it may also be useful to address the purpose and management of clinical trials in this context)

- the roles and responsibilities of at least five key personnel.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give reasons why pharmaceutical preparation and manufacture is highly controlled by legislation and standards, using examples to support the points made. Reference must be made to **at least six** pieces of legislation and standards (AC1.1)

2   provide details of how legislation governs the manufacture and supply of clinical trial materials, giving reasons and examples to support the points made (AC1.2)

3   set out the main roles and responsibilities of **at least five** key personnel in pharmaceutical preparation and manufacture (AC1.3)

4   give reasons why it is important to have a robust recording system in pharmacy preparation and manufacturing, using examples to support the points made (AC1.4)

5   provide details of the difference between preparation and manufacture, giving reasons and examples to support the points made (AC1.5)

6   give a clear account of the use of documentation in the preparation and manufacture of medicines, using their own words and including all the relevant information (AC1.6).

Learning outcome 2: Understand the importance of maintaining environments for pharmaceutical manufacture in relation to Good Manufacturing Practice (GMP)

An example of a suitable assignment to cover this learning outcome could be a plan for a unit in which pharmaceuticals can be prepared. The design should consider clean room requirements: the different environments and techniques used for pharmaceutical manufacturing, materials, fixtures, fittings and equipment.

Apprentices will need to add accompanying notes to explain and discuss the different sources of contamination and how the unit will minimise these in order to produce a product of high quality. Apprentices will need to include details on the potential consequences of the different sources of contamination, the importance of basic and personal hygiene and planned preventative maintenance (PPM).

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give reasons why different environments are used for pharmaceutical manufacturing, using examples to support the points made (AC2.1)

2   give reasons why hygiene is important in pharmaceutical manufacture, using examples to support the points made and showing understanding of how hygiene relates to the safety of individuals (AC2.2)

3   give reasons why process design and workflow are important in the manufacture of pharmaceutical products, using examples to support the points made (AC2.3)

4   discuss in detail **at least three** different sources of contamination that could be present in a manufacturing environment, showing understanding of ways to minimise each of these sources of contamination (AC2.4)

5   provide details of the potential consequences of **at least three** different sources of contamination within pharmaceutical manufacturing, giving reasons and examples to support the points made (AC2.5)

6   give a clear account of the importance of planned preventative maintenance in pharmaceutical manufacturing, using their own words and including all the relevant information (AC2.6)

7   give a clear account of the procedures for preparing the environment for the manufacture of medicines, using their own words and including all the relevant information (AC2.7)

8   provide details of the difference between sterile, non-sterile and aseptic techniques in the manufacturing of pharmaceutical products, giving reasons and examples to support the points made (AC2.8).

Learning outcome 3: Understand how medicines are manufactured

An example of a suitable assignment to cover this learning outcome could be batch sheets for manufacturing each of six different pharmaceutical products. Apprentices will need to include a formula for the required quantity, equipment needed, instructions for manufacture, critical checks and the requirements of packaging and labelling and the principles for these. Apprentices will also need to describe aseptic technique and the different methods of sterilisation required for some of these products. Some consideration could be given to specialised workstations used for the preparation of immunological and genetic materials.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give a clear account of **at least six** different types of pharmaceutical products, including all the relevant information about each (AC3.1)

2   give a clear account of **at least four** different pharmaceutical manufacturing techniques, using their own words and including all the relevant information (AC3.2)

3   provide details of the use of **at least five** different types of equipment in the manufacturing environment, giving reasons and examples to support the points made (AC3.3)

4   set out the main points of the governance in relation to the principles of labelling and packaging (AC3.4)

5   give reasons why the correct labelling and packaging of pharmaceutical products is important both on manual and automated systems, using examples to support the points made (AC3.5)

6   give a clear account of the different methods of sterilisation, using their own words and including all the relevant information (AC3.6).

Learning outcome 4: Understand how to perform calculations for pharmaceutical formulae

An example of a suitable assignment to cover this learning outcome could be a selection of sample worksheets for a variety of products. Apprentices would need to calculate accurate quantities and dosages for each product, explaining the possible consequences of any errors made on this documentation.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   give reasons why performing accurate calculations is important, using examples to support the points made (AC4.1)

2   provide details of how to calculate accurate dosages and quantities for individuals in accordance with prescriptions, giving reasons and examples to support the points made (AC4.2).

Learning outcome 5: Understand the principles of pharmaceutical quality systems in the manufacture of pharmaceutical products

An example of a suitable assignment to cover this learning outcome could be a chart with accompanying notes to describe the different types of products made in aseptic units. Where possible, apprentices should use examples from their own workplace.

The chart will need to include the following:

- the type of product and how it is tested for quality

- how the critical parts of the production process are validated (process, equipment, environment and operators)

- why validation is important in aseptic preparation.

Apprentices will need to add notes to the chart to explain the role of quality assurance and quality control in pharmaceutical quality systems, discuss safe systems and error reduction strategies, and describe audit processes for licensed and unlicensed units.

To satisfy the assessment criteria for this learning outcome, apprentices will:

1   provide details of the role of quality assurance and quality control in pharmaceutical quality systems, giving reasons and examples to support the points made (AC5.1)

2   give a clear account of how manufactured products are tested for quality, using their own words and including all the relevant information (AC5.2)

3   give a clear account of **at least three** types of validation that are carried out in pharmaceutical manufacturing, using their own words and including all the relevant information (AC5.3)

4   discuss in detail safe systems and error reduction strategies in the context of medicines manufacture, showing understanding of the strengths, weaknesses and other relevant factors relating to these systems and strategies (AC5.4).

5   give a clear account of the different audit processes in licensed units and unlicensed units, using their own words and including all the relevant information (AC5.5).

Textbooks

Beaney A – *Quality Assurance of Aseptic Preparation Services: Standards Handbook*, 5th edition (Royal Pharmaceutical Society, 2016) ISBN 9780857113078

MHRA (Medicines Healthcare and Products Regulatory Authority) – *Rules and Guidance for Pharmaceutical Manufacturers and Distributors 2017 (The Orange Guide)* 10th edition (Pharmaceutical Press, 2017) ISBN 9780857112859

Documents

EudraLex – Volume 4 Good Manufacturing Practice (GMP) guidelines –

ec.europa.eu/health/documents/eudralex/vol-4

The supply of unlicensed medicinal products "special" MHRA guidance note 14 –

www.gov.uk/government/publications/supply-unlicensed-medicinal-products-specials

Relevant legislation

The Medicines Act 1968 – www.legislation.gov.uk/ukpga/1968/67

The Human Medicines Regulations – www.legislation.gov.uk/uksi/2012/1916/contents/made

The Medicines for Human Use (Clinical Trials) Regulations 2004 – www.legislation.gov.uk/uksi/2004/1031/contents/made

European legislation

Directive 2001/83/EC (Human medicines) – ec.europa.eu/health/sites/health/files/files/eudralex/vol-1/dir_2001_83_consol_2012/dir_2001_83_cons_2012_en.pdf

Directive 2003/94/EC (Good manufacturing practice) – ec.europa.eu/health/sites/health/files/files/eudralex/vol-1/dir_2003_94/dir_2003_94_en.pdf

Directive 2011/62/EU (Falsified medicines directive) – ec.europa.eu/health/sites/health/files/files/eudralex/vol-1/dir_2011_62/dir_2011_62_en.pdf

Directive 2001/20/EC (Clinical trials) – ec.europa.eu/health/sites/health/files/files/eudralex/vol-1/dir_2001_20/dir_2001_20_en.pdf

Websites

www.ema.europa.eu/en	European Medicines Agency
www.gov.uk/government/organisations/medicines-and-healthcare-products-regulatory-agency	Medicines and Healthcare Products Regulatory Agency
pasg.nhs.uk	NHS Pharmaceutical Aseptic Group
www.sps.nhs.uk	Specialist Pharmacy Service
www.tset.org.uk	Technical Specialist Education and Training

Unit 22: Professional Discussion End–point Assessment for Pharmacy Technician Apprentices

Level:	3
Credit value:	0
Guided Learning Hours:	1.5
Total unit time:	4.5

Unit summary

This is a unit for the professional discussion element of the End-point Assessment Plan for Pharmacy Technicians.

Purpose

The professional discussion is a planned structured discussion between the apprentice and the independent end-point assessor, based on a review of the apprentice's portfolio of evidence. Its purpose is to assess the apprentice's understanding and their ability to apply the relevant skills in carrying out their job role. The main purpose of this assessment method is to allow the apprentice to draw on evidence from their portfolio to support their evidence of knowledge, skills and behaviours in their day-to-day role.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Pass criteria		Distinction criteria		Knowledge, skills and behaviours
1	Be able to explain and evidence the duties of a Pharmacy Technician from own practice	P1	Explain how to work accurately to regulatory and professional standards, including local and national guidelines (K1 K2 K23 S29 B1)	D1	Explain a complex problem, the possible solution(s) identified, the checks made using the regulatory and professional standards, and the consequences of the potential outcomes (K1 K2 S7 B1)	K1 How to ensure legal regulatory and professional standards are maintained K2 Understand the limits of their accountability, authority and responsibility, and those of the science of pharmacy K23 Know how to work within any local, regional and national guidelines and policies S29 Prioritise time and resources effectively to achieve local and national objectives B1 Always act in a manner supportive of the spirit of the regulatory standards K3 Understand the basic pharmacological principles, actions and use of drugs K4 How to ensure the quality of ingredients to produce and supply safe and effective medicines and products
		P2	Explain the principles relating to the science of pharmacy, together with an understanding of the use of drugs (K3)	D2	Give an example of how they explained the possible medicines options to a patient, the benefits of each option, how this helped the patient make an informed choice, and how they managed the patient's reaction (K3 K6 S11)	

Learning outcomes		Pass criteria		Distinction criteria		Knowledge, skills and behaviours
		P3	Describe the process as to how to accurately dispense drugs to ensure safe and effective medicines and products are supplied in a supportive manner (K4 K27 S12)			K27 Understands how to effectively manage medicines
						S12 Take personal responsibility for the legal, safe and efficient supply of medicines
						K5 Understand the principles that underpin person-centred care
		P4	Explain the principles that relate to good person-centred care (K5 S20)	D3	Explain the benefits of adopting a person-centred care approach and how this can positively affect patients and the wider community (K5 S20)	S20 Give the person all relevant information and advice in a way they can understand, so they can make informed decisions about their health and wellbeing
						K6 How to apply professional judgement in the best interests of people
		P5	Explain examples of when they have applied their professional judgement in the best interest of people (K6)			K8 Understand the principles of governance and confidentiality
						S7 Apply the principles of clinical governance and ensure the person's confidentiality
		P6	Explain the principles of confidentiality, and effective governance (K8 S7 S13)	D4	Can explain the impact of a breach in patient confidentiality, and the implications for the patient and the pharmacy (K8)	S13 Apply the principles of governance
						K10 How to apply safe working practices in line with health and safety legislation;

Learning outcomes		Pass criteria		Distinction criteria		Knowledge, skills and behaviours
		P7	Explain the importance of working in a safe environment, and adopting safe working practices (K10 S11)			know how to risk assess processes and manage outcomes

S11 Provide a safe, effective and responsive pharmacy service

K11 Know how to effectively deliver key messages to healthcare team members

K15 Understand the importance of effective methods of communication to different audiences

S23 Adapt information and communication to meet the needs of particular audiences

K12 Understand the principles of audit and quality-improvement strategies, and how to implement recommendations effectively

S16 Explain the impact of audit and evaluation on the quality of pharmacy operations and services

S17 Engage others in the improvement of processes and systems

K13 Understand the principles of risk management |
		P8	Explain how they pass on relevant information that is appropriate to the needs of particular audiences (K11 K15 S23)	D6	Evaluate the impact of poor communication practice on the pharmacy (K11 K18 S20 B5)	
		P9	Explain the importance of audit and the adoption quality systems and processes, and how they involve others to ensure compliance (K12 S16 S17)	D5	Explain where they have made an improvement to the operational procedures and processes and how it has benefitted the pharmacy and patients (K12)	
		P10	Explain the principles behind risk management (K13)			
		P11	Give examples of working effectively with colleagues at all levels, and explain how they respond to			

Learning outcomes		Pass criteria		Distinction criteria		Knowledge, skills and behaviours
			feedback and concerns (K14 B2 K18)			K14 Understand the most appropriate ways to reflect and act on feedback or concerns, thinking about what can be done to prevent adverse incidents
		P12	Explain with examples how they effectively manage their own personal development (K19 K20 S25 S26)	D7	Explain how implementation of personal development activity has benefitted the pharmacy, and how they have shared new knowledge with junior staff to improve their practice (K19 K20 K26 S25 S32)	B2 Always act with integrity, openness, honesty, especially when things go wrong.
						K18 Understand how to effectively collaborate and work with colleagues and healthcare professionals
						K19 Know how to manage their own personal development
		P13	Understand the importance of safeguarding, and the effective care of vulnerable adults (K21 S28)			K20 Understand the principles of revalidation
						S25 Suggest and implement personal goals and methods of improvement
						S26 Maintain CPD outcomes in line with regulatory requirement
		P14	Describe the process for dealing with complaints (K22 S27 B2)	D8	Explain when they have dealt with a complex complaint, including how they analysed it, how it was resolved, and identified the next step(s) to ensure the	K21 Understand how to safeguard people, particularly children and vulnerable adults

Learning outcomes		Pass criteria		Distinction criteria		Knowledge, skills and behaviours
				complaint was not escalated (K22 K27 S27)		S28 Ensures effective safeguards are in place particularly for children and vulnerable adults
		P15	Describe how they would manage a medical emergency in line with health and safety legislative requirements and local controls procedures and policies (K24 K25 S30 S31)			K22 Understand how to deal with complaints and errors, through effective use of established policies and procedures
						S27 Identify and respond effectively to errors and near misses
						B2 Always act with integrity, openness, honesty, especially when things go wrong
		P16	Explain how they respect diversity and cultural differences (K15 S23 B5)			K24 Know how to apply health and safety legislation in the workplace controls

Learning outcomes		Pass criteria		Distinction criteria		Knowledge, skills and behaviours
		P17	Explain with examples how they effectively supervise others (K26 S32 B3)			K25 Know how to respond appropriately to medical emergencies
						S30 Respond to medical emergencies
						S31 Ensure that health and safety controls are embedded and working
						K15 Understand the importance of effective methods of communication to different audiences
						S23 Adapt information and communication to meet the needs of particular audiences
						B5 Value diversity and respect cultural differences – making sure that every person is treated fairly and with respect
						K26 Understand how to effectively supervise other staff within the pharmacy
						S32 Effectively supervise other members of the team
						B3 Be reliable, supportive and reflective

Format

The table below gives information about the structure, context duration and grading of the professional discussion.

Structure and context	This unit must be assessed in line with the Pharmacy Technician End-point Assessment Plan (ST0300/AP01).
	This assessment will take the form of a professional discussion, which must be appropriately structured to draw out the best of the apprentice's competence and excellence and cover the duties and KSBs assigned to this assessment method.
	The apprentice must use a portfolio to evidence how they have met the KSBs.
	The Independent End-point Assessor will ask 15 questions.
Duration	90 mins (+/-10mins)
Grading	Fail/Pass/Distinction

The professional discussion contributes 50% to the overall end-point assessment grade.

Required supporting evidence

Apprentices are required to provide work-based evidence to validate and support their responses in the professional discussion.

The supporting portfolio of evidence should typically have 30 pieces of evidence.

The portfolio of evidence can be electronic or paper-based (or a mixture of both) and will be made up of a collection of evidence in a variety of formats including written, audio, and video. Reflective accounts and self-evaluation cannot be included as evidence.

Suitable work-based evidence includes:

- video/audio comments/extracts
- written statements
- project plans
- reports/minutes/action logs
- observations
- discussions from networks/working groups
- presentations

- feedback (managers)
- performance reviews.

Observation records and expert witness testimonies provided as evidence must be completed by someone with line management responsibility in the employer organisation. They must have occupational expertise and a good understanding of the grade criteria and evidence requirements.

The portfolio should be arranged in 10 sections to align with the duties of the standard as follows, and each section must have four pieces of evidence:

- Section 1: Work within regulatory standard to optimise a person's medicines
- Section 2: Provide person-centred care
- Section 3: Manage or support the day-to-day operation of the pharmacy
- Section 4: Provide education and training to pharmacy and wider healthcare teams
- Section 5: Maintain a quality service through audit and evaluation
- Section 6: Advise people on the safe use of medicines and devices
- Section 7: Manage continued professional and person development for self and others
- Section 8: Ensure patient safety
- Section 9: Provide specialist services
- Section 10: Respond appropriately to medical emergencies.

On commencement of the qualification, the apprentice must begin to retain a portfolio of evidence, which must be finalised before passing through the gateway. The portfolio will be used to inform the questioning for the professional discussion. The portfolio itself is not assessed. It must contain at least one piece of evidence mapped clearly to each of the knowledge, skills and behaviours (KSBs) relating to this assessment method.

Although each piece of evidence may map to more than one KSB, this will typically result in 30 pieces of evidence to cover all KSBs listed. The employer must sign off the portfolio of evidence, thereby authenticating it.

Work-based evidence to support the professional discussion must be:

- **Valid** – relevant and appropriate to meet the skills and behaviours within the grade criteria.
- **Authentic** – evidence produced by the apprentice and not that of someone else or a group of people.
- **Sufficient** – fully meet the standards (quality) detailed in the evidence requirements.

- **Compliant** – does not breach regulations and organisational policies and procedures, including those concerning confidentiality.

Apprentices need to be mindful of issues of confidentiality and data protection in the use of work products.

Selecting the work-based evidence

It is expected that evidence to be used in the professional discussion will be generated during the on-programme units of learning (*units 1-21*).

In selecting and compiling the evidence, apprentices should think how they can use evidence holistically, i.e. using a single piece of evidence to support their responses to multiple grade criteria. This will be particularly useful for evidencing behaviours. This approach reduces the volume of evidence to be collected and reduces the burden on the apprentices. Apprentices must ensure that the evidence they select meets the stated evidence requirements for each grade criterion.

Evidence submitted to support the professional discussion can be presented as hard copy or digital; apprentices must discuss and agree the best format with their employer and/or training provider.

It is recommended that the work-based evidence is sequenced according to the numerical order of the grade criteria. Apprentices must clearly label each piece of evidence with the date it was generated, the number of the grade criteria it is satisfying and a suitable name to indicate what it is. Apprentices are not required to annotate the evidence but are advised to do this as good practice and to support them in presenting the evidence during the professional discussion.

Please refer to *Unit 23: Professional Discussion End-point Assessment for Pharmacy Technician Apprentices* for further details on compiling the portfolio of evidence.

Employers and/or training providers are to support apprentices in producing their suitable work-based evidence. This includes ensuring that:

1. Apprentices understand the quality and sources of evidence required to meet the standard as detailed in the evidence requirements, which you can find in *Pearson's End-point Assessment Resources Pack (EPARP)*

2. They have arranged and conducted sufficient and appropriate observation assessments with apprentices to ensure that they will have suitable evidence.

3. Apprentices understand how to, and have practice in, presenting and using their evidence in the assessment process.

Handover of evidence to Pearson ahead of the assessor visit

1. All work-based evidence must be submitted by apprentices to the relevant person in their organisation before the end-point assessment gateway. The evidence must be accompanied by the *Portfolio Authentication and Certification Declaration Form (Annexe I)*, which must be signed and dated by the apprentice and their trainer/tutor.

2. After submission, the evidence must be stored securely by the employer and/or training provider in a locked cupboard/cabinet or electronically on a secure drive on a computer.

Following gateway, the independent end-point assessor will contact employers to arrange a date for the handover of evidence. All work-based evidence must be uploaded onto ACE360. The end-point assessor will review the evidence in preparation for the professional discussion assessment but will not directly assess it.

Delivery and conduct

This section provides information on how the professional discussion will be conducted and how apprentices are expected to interact with the assessment process. It is important that this information is shared with apprentices before they undertake the assessment.

1. The professional discussion will last for approximately 90 minutes (+/- 10 minutes) and may be conducted face to face, or remotely using video-conferencing software with audio-recording capabilities, depending on the agreement with the apprentice's employer.

2. The professional discussion will be facilitated by an independent end-point assessor who will use a series of questions to focus and guide the interactions with the apprentice. The questions are designed to draw out the evidence required to meet the Pass and Distinction grade criteria detailed on pages 283–288.

3. The discussion will take place in a quiet place away from the apprentice's everyday working environment with no interruptions or distractions. Apprentices will be informed of the location by their employer, before the time of the assessment. An employer representative may be present during the professional discussion but cannot take any active part in the assessment. The independent end-point assessor will facilitate the discussion and make all assessment decisions.

4. Apprentices must work independently when preparing for and taking part in the professional discussion. They must not share details of the questions or evidence to be provided with others.

5. When responding to the professional discussion questions apprentices must present (i.e. talk through) their work-based evidence to validate their responses. In presenting the work-based evidence, apprentices must give a brief description of the context of the evidence and then clearly outline what it shows and how it demonstrates that they have met the standards. Apprentices need to be mindful of

Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship)
Specification – Issue 2 – December 2021 © Pearson Education Limited 2021

confidently and data protection when talking about their work-based evidence. Apprentices must ensure their work-based evidence is appropriate to support their professional discussion responses, which demonstrates to the assessor that they have met the grade criteria. Responses not supported by appropriate work-based evidence will not be considered as meeting the grade criteria.

6. The independent end-point assessor will make notes of the apprentice's responses during the professional discussion and the professional discussion will be audio recorded to support assessment decisions and for verification purposes.

7. At the end of the professional discussion, the independent end-point assessor will review the responses provided by the apprentice against the grade criteria on pages 283–288 and make a decision on whether the apprentice has met these.

Assessing performance

The independent end-point assessor will use the Pass and Distinction grade criteria on pages 283–288and the evidence requirements found in the *EPARP* document to judge the apprentice's performance in the professional discussion. No other sources of information will be used to make judgements about the quality and sufficiency of the apprentice's evidence.

Unit 23: Observation End-point Assessment for Pharmacy Technician Apprentices

Level:	3
Credit value:	0
Guided Learning Hours:	1.5
Total unit time:	3

Unit summary

This is a unit for the observation element of the End-point Assessment Plan for Pharmacy Technicians.

Purpose

The observation involves the independent end-point assessor observing the apprentice carrying out their routine work activities in their regular working environment. Its purpose is to assess the apprentice's skills and behaviours related to specific areas of the Apprenticeship Standard.

Pharmacy Technician is a practical occupation and a live observation enables the assessment of a broad range of the KSB of the apprentice within a realist work setting, under normal conditions.

Learning outcomes and assessment criteria

To pass this unit, the apprentice needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the apprentice is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Pass criteria		KSBs
1	Be able to carry out the duties of a Pharmacy Technician under observation	1.1	Demonstrate clear and effective communication with patients and colleagues (K7 S15)	K7 How to communicate with patients, carers and colleagues using a wide range of options and channels focusing on delivering and improving pharmacy services S15 Communicate and work effectively with members of the multidisciplinary team K9 How to order, receive, maintain, supply and dispose of medicines and other pharmaceutical products safely, legally and effectively S1 Recognise and work within their scope of practice and skills S4 Accurately assemble prescribed items S5 Issue prescribed items safely and effectively and take action to deal with discrepancies, carry out an accuracy check of dispensed medicines and products
		1.2	Undertake the accurate dispensing of medicines and other products, undertaking accuracy checks where necessary and dealing with discrepancies (K9 S1 S4 S5 S8 B1)	
		1.3	Demonstrate that they can effectively order, dispvense and dispose of medicines in effective and efficient manner (K9 S18)	
		1.4	Listen and provide relevant and clear advice to persons, taking into account their specific needs (K16 K17 S19)	
		1.5	Demonstrate that they are able to work within their scope of practice (S10)	
		1.6	Can retrieve and accurately use relevant data in their work (S2 S3 S6)	

Learning outcomes		Pass criteria		KSBs
		1.7	Ensure that all patient and other data is treated with confidentiality (S14 B4)	S8 Assess a person's present supply of medicines and order appropriate medicines and products.
		1.8	Provide relevant advice on appropriate healthy lifestyle options (K17 S21)	B1 Always act in a manner supportive of the spirit of the regulatory standards
		1.9	Demonstrate that they have clearly understood the needs of a person, by obtaining relevant information, and using in a safe and effective manner (K16 S9 S22)	K9 How to order, receive, maintain, supply and dispose of medicines and other pharmaceutical products safely, legally and effectively
		1.10	Conduct self-checks on their own work and that of others to ensure accuracy and safe (S9 S24)	S18 Effectively use systems to support the safe and effective management and supply of medicines
		1.11	Demonstrate that they act to ensure that they respect diversity and cultural differences (K16 S19 B5)	K16 Know how to manage a person's diverse needs and what is important to them

Learning outcomes				KSBs
				K17 Know to provide and promote advice on healthy lifestyles and initiatives, using available resources and evidence-based techniques
				S19 Listen to a person, understand their needs and interpret what matters to them
				S10 Demonstrate operational skills within their scope of practice
				S2 Use relevant data and information to make effective decisions
				S3 Accurately retrieve and reconcile information about a person's medicines
				S6 Accurately perform pharmaceutical calculations to ensure the safety of people
				S14 Ensure the confidentiality of patient data
				B4 Respect all individual's values and confidentiality
				S21 Optimise a person's medicines to achieve the best possible outcomes
				S9 Receive requests for medicines, including prescriptions, and check for their validity, safety and clarity, taking action to deal with any problems with the person directly

Learning outcomes			Pass criteria		KSBs
					S22 Obtain relevant information from people – including patients, carers and other healthcare professionals – and use it to optimise care appropriately
					S24 Check and review their own and others' work effectively
					B5 Value diversity and respect cultural differences – making sure that every person is treated fairly and with respect

Format

The table below gives information about the context, duration and grading of the observation.

Context	This unit must be assessed in line with the Pharmacy Technician End-point Assessment Plan (ST0300/AP01).
	The apprentice must be observed carrying out their duties in their normal place of work.
	The observations must be carried out over a maximum total assessment time of 60 minutes, followed by 20 minutes of questions and answers. The independent assessor has the discretion to increase the overall time by 10% to allow the apprentice to complete tasks and answers at the end of this assessment.
	The following activities MUST be observed during the observation, and the KSBs mapped to this method must be demonstrated:
	• dispensing of medicines
	• delivery of person-centred care.
	This unit will be graded Pass or Fail.
Duration	60 mins plus 20 min Q&A (+/-10mins)
Grading	Pass

The observation contributes 50% to the overall end-point grade.

Delivery and conduct

This section provides information on how the observation will be conducted and how apprentices are expected to interact with the assessment process. It is important that this information is shared with apprentices before they undertake the assessment.

In advance of the observation, apprentices must be provided with information on the format of the observation, including timescales.

1. The assessment is to be take place in the apprentice's regular working environment. Apprentices will be informed by their employer when the observation will take place. The apprentice will be observed carrying out day-to-day activities in a live setting.

2. The observation will last for approximately 60 minutes, followed by 20 minutes of questions and answers. The independent assessor has the discretion to increase the overall time by 10% to allow the apprentice to complete tasks and answers at the end of this assessment.

3. The observation will be conducted by the independent end-point assessor, who will judge the apprentice's performance against the grading criteria on pages 295–298.

4. If the presence of the end-point assessor will become obtrusive, then the observation, or part of the observation, can be done at a distance (e.g. not in the same room) with the use of suitable technology. This will need to be discussed and agreed as part of the end-point assessment planning and scheduling process.

5. The independent end-point assessor reserves the right to intervene or end the observation should the apprentice pose a risk to themselves or others.

6. The independent end-point assessor will make notes whilst conducting the observation.

7. The following activities must be observed during the observation, and the KSBs mapped to this method must be demonstrated:

   - dispensing of medicines

   - delivery of person-centred care.

8. Where it is not possible to directly observe a particular skill or behaviour due to limitations of the assessment context, then the apprentice will be asked situational 'what if' questions in order to collect the necessary evidence for the assessment.

9. Following the completion of the observation, the independent end-point assessor will ask the apprentice questions in the question and answer session. They will ask a minimum of three open questions from the 'bank of questions' held by the EPAO. They may ask additional follow-up questions, where clarification is required. KSBs that did not occur during the observation will be covered by the question and answer session.

14 Further information and useful publications

To get in touch with us visit our 'Contact us' pages:

- Edexcel, BTEC and Pearson Work Based Learning contact details: qualifications.pearson.com/en/support/contact-us.html
- books, software and online resources for UK schools and colleges: www.pearsonschoolsandfecolleges.co.uk

Key publications

- *Access arrangements and reasonable Adjustments* (Joint Council for Qualifications (JCQ))

- *A guide to the special consideration process* (JCQ)

- *A guide to recruiting apprentices onto Pearson qualifications* (Pearson)

- *Centre guidance: Dealing with malpractice and maladministration in vocational qualifications* (Pearson)

- *Centre Guide to Quality Assurance – Pearson NVQs/SVQs and Competence-based qualifications* (Pearson)

- *Collaborative and consortium arrangements for the delivery of vocational qualifications policy* (Pearson)

- *Delivery Guidance and Quality Assurance Requirements – NVQs/SVQs and Competence-based qualifications* (Pearson)

- *Enquiries and appeals about Pearson vocational qualifications and end-point assessment policy* (Pearson)

- *EPA Service Guides* (Pearson)

- *Equality, diversity and inclusion policy* (Pearson)

- *Recognition of prior learning policy and process* (Pearson)

- *Suspected malpractice in examinations and assessments – Policies and procedures* (Joint Council for Qualifications (JCQ))

- *Guidance for reasonable adjustment and special consideration in vocational internally assessed units* (Pearson)

- *UK Information Manual* (Pearson)

- *Use of languages in qualifications policy* (Pearson).

Further information and publications on the delivery and quality assurance of competence-based qualifications are available on our website.

To order publications, please go to the resources page of our website.

For books, software and online resources for UK schools and colleges please go to: www.pearsonschoolsandfecolleges.co.uk

15 Contact us

We have a dedicated Account Support team, across the UK, to give you more personalised support and advice. To contact your Account Specialist:

Email: wblcustomerservices@pearson.com
Telephone: 0844 576 0045

If you are new to Pearson and would like to become an approved centre, please contact us by:

Email: wbl@pearson.com
Telephone: 0844 576 0045

16 Professional development and training

Professional development and training

Pearson supports customers with training related to our qualifications. This support is available through a choice of training options offered on our website.

The support we offer focuses on a range of issues, such as:

- planning for the delivery of a new programme

- planning for assessment and grading

- developing effective assignments

- building your team and teamwork skills

- developing apprentice-centred learning and teaching approaches

- building in effective and efficient quality assurance systems.

The national programme of training we offer is on our website. You can request centre-based training through the website or you can contact one of our advisers in the Training from Pearson UK team via Customer Services to discuss your training needs.

Training and support for the lifetime of the qualifications

Training and networks: our training programme ranges from free introductory events through sector-specific opportunities to detailed training on all aspects of delivery, assignments and assessment. We also host some regional network events to allow you to share your experiences, ideas and best practice with colleagues in your region.

Regional support: our team of Regional Quality Managers, based around the country, are responsible for providing quality assurance support and guidance to anyone managing and delivering NVQs/competence-based qualifications. The Regional Quality Managers can support you at all stages of the standard verification process as well as in finding resolutions of actions and recommendations as required.

To get in touch with our dedicated support teams please visit our website at qualifications.pearson.com/en/support/contact-us.html

Online support: find the answers to your questions in *Knowledge Base*, a searchable database of FAQs and useful videos that we have put together with the help of our subject advisors to support you in your role. Whether you are a teacher, administrator, assessment associate (AA) or training provider, you will find answers to your questions. If you are unable to find the information you need, please send us your query and our qualification or administrative experts will get back to you.

Annexe A: Assessment Principles for the Level 3 Diploma in the Principles and Practice for Pharmacy Technicians

1. Introduction

This is a nationally recognised qualification accredited by Ofqual / Qualifications Wales. The qualification is based on National Occupational Standards and is recognised by the statutory regulator, the General Pharmaceutical Council (GPhC), as meeting the Initial Education and Training Standards for Pharmacy Technicians (October 2017).

This qualification has been designed to confirm occupational competence for Pharmacy Technicians working in a pharmacy setting. The qualification meets the requirements of the pharmacy regulator and meets employer needs in England and Wales. On completion of the qualification and subject to regulatory requirements, it will enable the apprentice to register with the GPhC as a Pharmacy Technician.

This qualification also meets the Skills for Health Qualification Design Criteria.

2. Assessment requirements/strategy

This qualification must be assessed in line with the Awarding Organisation qualification assessment strategy as well as in line with Skills for Health Assessment Principles for Occupational Competence (v4 November 2017).

This qualification consists of both skills units and knowledge units. All units are mandatory. This on-programme units of learning (units 1-21) are graded Pass or Fail, with an overall integrated apprenticeship grade of Fail/Pass/Distinction

Apprentices are permitted to use one piece of evidence to demonstrate knowledge, skills and understanding across different assessment criteria and/or different units. This qualification should incorporate holistic assessment for the units where appropriate.

2.1 Skills-based units

The primary method of assessment for the skills-based units is observation in the workplace by the assessor. Across the qualification's skills-based units there must be at least three observations which cover the required skills. Evidence should be generated over a period of time to show consistent performance. Expert witness testimony may be used where it is difficult for an assessor to observe aspects of practice. Expert witness testimony is NOT a substitute for the requirement of three observations by the assessor across the qualification.

At any time during assessment if the assessor observes unsafe practice, the assessment will be stopped immediately.

Where the assessment activity involves individuals using pharmacy services, consent should be sought from the individual/patient that they are happy for the assessor to be present and this should be recorded by the assessor.

Apprentices will be expected to achieve all learning outcomes and assessment criteria. Where apprentices are not able to achieve the skills-based learning outcomes in their usual place of employment (e.g. a custodial setting), the training provider and employer must ensure that the apprentice is given opportunities to achieve the learning outcomes in a work placement or another suitable setting. This may include simulation. Prior to starting the qualification, an assessment of the apprentice's employment setting should be carried out by the training provider and employer to identify such gaps.

There are additional evidence requirements for some of the skills units (marked with an * in Appendix 1) which must be met.

2.2   Knowledge-based units

For knowledge-based units, evidence will be assessed using internally set, internally marked written assignments. The Awarding Organisation will provide sample assignments and assessment guidance to centres. The assignments will be internally quality assured, then subject to externally quality assurance sampling by the Awarding Organisation.

Centres must also carry out regular standardisation activities as part of the ongoing quality assurance of assessment decisions within the assignments used for knowledge-based units and assignments should be refreshed over time.

2.3   Retakes for knowledge-based units

Apprentices will be a given maximum of four weeks to complete each assignment. If the apprentice does not pass the assignment on the first attempt, they will be given a maximum of two further opportunities to retake the assessment criteria that they failed on the first attempt. Retakes should be submitted within two weeks (for each retake).

Centres should use recording documentation to record assignment retake results and feedback.

2.4   Additional assessment methods

In addition to the evidence requirements set out in each unit, a range of assessment methods have been identified for the qualification units which may include evidence generated using the following:

- question and answer sessions based on the apprentice's workplace activities
- apprentice's own personal statements/reflections
- professional discussion.

The additional assessment methods above should NOT be used instead of or in place of the stated assessment methodology in each unit.

The additional assessment methods provide the opportunity for different learning styles and individual needs of apprentices to be taken into account. If centres are proposing to use an assessment method that is not included within the recommended list, centres should contact the External Quality Assurer with full details of the proposed method which will need formal approval from the Awarding Organisation before it can be used.

3. Roles and Responsibilities in the Assessment Process

3.1 Assessors

Assessors must:

- be a registered pharmacist or a registered Pharmacy Technician who is occupationally competent in the area of practice to which the unit being assessed applies

- hold or be working towards the appropriate assessor qualification. Assessors holding legacy qualifications must be able to demonstrate that they are assessing to current standards

- have credible experience which is clearly demonstrable through continuing learning and development.

3.2 Internal Quality Assurers

Internal Quality Assurers (IQA) must:

- be a registered pharmacist or a registered Pharmacy Technician

- it is crucial that internal quality assurers understand the nature and context of the assessor's work and that of their candidates due to the critical nature of the work and the legal and other implications of the assessment process

- have a working knowledge of pharmacy and/or GP dispensing settings, the regulation, legislation and codes of practice for the service (where applicable) at the time any assessment is taking place

- occupy a position that gives them authority and resources to coordinate the work of assessors, provide authoritative advice, call meetings as appropriate, visit and observe assessments and carry out all the other internal quality assurance roles

- hold or be working towards an appropriate internal quality assurance qualification. Internal quality assurers holding legacy qualifications must be able to demonstrate that they are working to current standards

- have undertaken the appropriate assessor qualification identified by the regulator and practised as an assessor prior to undertaking the internal quality assurer role.

It is recognised that internal quality assurers are expected to verify the assessment process and not reassess the evidence provided.

3.3 Expert witnesses

The use of expert witness testimony is encouraged as a contribution to the provision of performance evidence presented for assessment. The role of the expert witness is to submit evidence to the assessor as to the competence of the apprentice in meeting the unit. This evidence must directly relate to the apprentice's performance in the work place which has been seen by the expert witness.

The expert witness must be either:

- a registered pharmacist or a registered Pharmacy Technician who is occupationally competent and knowledgeable in the area of practice to which the unit being assessed applies.

The expert witness must have:

- a working knowledge of units on which their expertise is based
- credible experience which is clearly demonstrable through continuing learning and development.

Centres are responsible for ensuring that all expert witnesses are familiar with the standards for those units for which they are to provide expert witness testimony. They must also understand the centre's recording requirements and will need guidance on the skills required to provide evidence for the units. It is not necessary for expert witnesses to hold an assessor qualification because the qualified assessor makes all assessment decisions about the acceptability of evidence regardless of source. This would include expert witness testimony.

3.4 Coordinating and Lead Assessors

In order that the requirements for occupational competence of assessors and expert witnesses can be met while allowing flexibility of delivery, apprentices may have more than one assessor or expert witness involved in the assessment process.

Where more than one assessor is involved in the qualification there must be a named assessor who is responsible for the overall co-ordination of the assessment for each candidate. This person will be responsible for integrating, planning and directing the assessment for the whole qualification. Where more than one assessor is involved in a unit, there must be named assessor who is responsible for the overall coordination of the assessment for that unit. The lead assessor must ensure that the best use is made of all available evidence and will make the final judgement of competence in each unit where other assessors have been involved. It is expected that all assessors will work closely with internal quality assurers to ensure standardised practice and judgments within the assessment process.

3.5   External Quality Assurers

External Quality Assurers (EQA) must:

- be a registered pharmacist or a registered Pharmacy Technician

- have working knowledge of pharmacy and/or GP dispensing settings, the regulation, legislation and codes of practice for the service (where applicable) at the time any assessment is taking place

- hold, or be working towards, the appropriate external verifier qualification as identified by the qualification's regulators. External quality assurers holding legacy qualifications must be able to demonstrate that they are assessing to current standards

- have credible experience which is clearly demonstrable through continuing learning and development.

External quality assurers who are not yet qualified against the appropriate competences but have the necessary occupational competence and experience, can be supported by a qualified external quality assurer who does not necessarily have the occupational expertise or experience.

External quality assurers will monitor the centre's processes and practice to ensure they meet the Awarding Organisation, qualification and regulatory requirements. The EQA will also provide support to centre staff and give advice and guidance to facilitate improvements.

Appendix 1

Structure of the qualification

This qualification contains 21 mandatory units. Apprentices must complete all 21 units to achieve the qualification.

Unit identifier	Unit title	Level	Credit	TUT
1	Principles of Person-centred Approaches for Pharmacy Technicians	3	5	50
2	Principles of Health and Safety for Pharmacy Technicians	3	2	20
3	Personal Development for Pharmacy Technicians	3	5	50
4	Principles of Health Promotion and Wellbeing in Pharmacy Services	3	5	50
5	Contribute to Service Improvement in the Delivery of Pharmacy Services	3	6	60
6	Principles for the Management of Pharmaceutical Stock	3	8	80
7	Undertake Medicines Reconciliation and Supply *	4	12	120
8	Assemble and Check Dispensed Medicines and Products *	4	8	80
9	Receive, Validate and Issue Prescriptions *	3	10	100
10J	Chemical Principles for Pharmacy Technicians	3	3	30
11	Biological Principles for Pharmacy Technicians	3	4	40
12	Medicinal and Non-medicinal Treatments for Gastrointestinal and Nutritional Conditions	3	5	50
13	Medicinal Treatments for Cardio-respiratory Conditions	3	6	60
14	Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal conditions	3	6	60

Unit identifier	Unit title	Level	Credit	TUT
15	Microbiology for Pharmacy Technicians	3	5	50
16	Actions and Uses of Medicines	3	9	90
17	Medicinal and Non-medicinal Treatments for Central Nervous System Conditions	3	6	60
18	Medicinal Methods for the Prevention, Protection from and Treatment of Infections	3	6	60
19	Medicinal Treatments for Endocrine, Gynaecological and Genitourinary Conditions	3	6	60
20	Medicinal Treatments for Sensory Organ Conditions	3	5	50
21	Principles of Safe Manufacture of Quality Medicines in the Pharmaceutical Environment	3	10	100
Total			132	1320

There are additional evidence requirements for some of the skills units (marked with an *) which must be met.

Appendix 2

Staff qualification requirements

#	Role	Staff qualifications
#1	Assessment of Competence	• Assessors must be GPhC registered and occupationally competent in the area of practice to which the unit being assessed applies • Hold or be working towards the appropriate assessor qualification • Have credible experience which is clearly demonstrable through continuing learning and development
#2	Assessment of Knowledge	• As for 'Role #1' • Or have credible qualifications and experience which is clearly demonstrable through continuing learning and development

#	Role	Staff qualifications
#3	IQA for Competence	• Must be GPhC registered and understand the nature and context of the assessor's work and that of their candidates • Have a working knowledge of pharmacy and/or GP dispensing settings, the regulation, legislation and codes of practice for the service (where applicable) at the time any assessment is taking place • Occupy a position that gives them authority and resources to coordinate the work of assessors, provide authoritative advice, call meetings as appropriate, visit and observe assessments and carry out all the other internal quality assurance roles • Have undertaken the appropriate assessor qualification and hold or be working towards an appropriate Internal Quality Assurance qualification.
#4	IQA for Knowledge	• As per Role #3 • Or have credible qualifications and experience which is clearly demonstrable through continuing learning and development. • Occupy a position that gives them authority and resources to co-ordinate the work of assessors, provide authoritative advice, call meetings as appropriate, and carry out internal quality assurance roles
#5	Sign-off of the Qualification	• Must be GPhC registered and understand the nature and context of the assessors' work and that of their candidates • Have a working knowledge of pharmacy and/or GP dispensing settings, the regulation, legislation and codes of practice for the service (where applicable) at the time any assessment is taking place • Occupy a position that gives them authority and resources to co-ordinate the work of assessors, provide authoritative advice, call meetings as appropriate, visit and observe assessments and carry out all the other internal quality assurance roles • Have undertaken the appropriate assessor qualification and hold or be working towards an appropriate internal quality assurance qualification

Useful links

- General Pharmaceutical Council, *Standards for the initial education and training of Pharmacy Technicians*, October 2017

- General Pharmaceutical Council, *Guidance on tutoring and supervising pharmacy professionals in training*, August 2018

- General Pharmaceutical Council, *Initial education and training of Pharmacy Technicians: evidence framework*, April 2018

- Skills for Health Assessment Principles http://www.skillsforhealth.org.uk/images/standards/qcf/Assessment%20of%20Competence%20-%20SfH%20Assessment%20Principles%20November%2017.pdf

- Health Education England https://www.hee.nhs.uk/

Annexe B: Template good character reference form

This form must be completed and signed by an official with direct responsibility for the apprentice, such as the apprentice's tutor, course director or line manager.

Apprentice name:	
Centre or employer name:	
Date apprentice registered or commenced employment:	
Date apprentice left centre or employment:	
I certify that, to the best of my knowledge, this apprentice is of good character and has suitable attributes to train as a Pharmacy Technician. (Please use the space below to add any relevant information in support of the above statement.)	
Official signature:	
Official name:	
Date:	

Annexe C: Template self–declaration for health form

This form must be completed and signed by the apprentice.

Apprentice name:	
Date of declaration:	

I have a health condition that may affect my ability to train as a Pharmacy Technician (Please tick YES or NO in the boxes below)	
YES **Please provide the information requested below (using extra sheet(s) if necessary) and sign and date the form**	**NO** **Please sign and date the form**

Details of your health condition, including any diagnosis and symptoms
Date of diagnosis
Date of the most recent episode or occurrence
Details of the advice or treatment you received following the most recent episode or occurrence
How does the health condition affect your ability to do the regular tasks you will need to do in your role as a pre-registration trainee Pharmacy Technician?
FOR CENTRE USE: Describe actions to be taken to support the apprentice in their role

Apprentice signature:	
Apprentice name:	
Date:	

Annexe D: Mapping of the IET and NOS to the Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (integrated apprenticeship) content

The grid below maps the General Pharmaceutical Council Initial Education and Training (IET) Standards for Pharmacy Technicians and the National Occupational Standards (NOS) to the content covered in the on-programme units of learning (*units 1-21*) for the Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (Integrated Apprenticeship).

BTEC competence-based units		IET references	Indicative NOS references
1	Principles of Person-centred Approaches for Pharmacy Technicians	GPhC LO1 – Involve, support and enable every person when making decisions about their health, care and wellbeing – Does GPhC LO2 – Optimise a person's medication to achieve the best possible outcomes – Does GPhC LO3 – Listen to the person, understand their needs and what matters to them – Does GPhC LO4 – Give the person all relevant information in a way they can understand, so they can make informed decisions and choices – Does GPhC LO5 – Advise people on the safe and effective use of their medicines and devices – Does GPhC LO6 – Obtain relevant information from people, including patients and other healthcare professionals - and use it appropriately – Does	Pharm02 Provide an effective and responsive pharmacy service Pharm03 Respond to pharmaceutical queries and requests for information CFAM&LBA7 Promote equality of opportunity, diversity and inclusion SCDHSC0024 Support the safeguarding of individuals SCDHSC0035 Promote the safeguarding of individuals

BTEC competence-based units	IET references	Indicative NOS references
1 Principles of Person-centred Approaches for Pharmacy Technicians *continued*	GPhC LO7 – Recognise and value diversity, and respect cultural differences – making sure that every person is treated fairly whatever their values and beliefs – Does	
	GPhC LO12 – Understand how to safeguard people, particularly children and vulnerable adults – Knows how	
	GPhC LO15 – Understand how to work within the local, regional and national guidelines and policies – Knows how	
	GPhC LO16 – Respond effectively to complaints, incidents and errors and in a manner which demonstrates person-centred care – Does	
	GPhC LO30 – Confirm the suitability of a person's medicines for use – Does	
	GPhC LO31 – Accurately retrieve and reconcile information about a person's medicines – Does	
	GPhC LO32 – Assess a person's present supply of medication and order appropriate medicines and products – Does	
	GPhC LO34 – Receive requests for medicines, including prescriptions, and check for their validity, safety and clarity, taking action to deal with any problems – Does	
	GPhC LO36 – Accurately assemble prescribed items – Does	

BTEC competence-based units		IET references	Indicative NOS references
1	Principles of Person-centred Approaches for Pharmacy Technicians *continued*	GPhC LO39 – Issue prescribed items safely and effectively and take action to deal with discrepancies – Does GPhC LO40 – Carry out an accuracy check of dispensed medicines and products – Does GPhC LO50 – Communicate and work effectively with members of the multi-disciplinary team – Does	
2	Principles of Health and Safety for Pharmacy Technicians	GPhC LO15 – Understand how to work within the local, regional and national guidelines and policies – Knows how GPhC LO18 – Take personal responsibility for health and safety of themselves and others and follow up any concerns about the workplace which might put them at risk – Does GPhC LO43 – Safely and legally dispose of medicines and other pharmaceutical products – Knows how GPhC LO44 – Respond appropriately to medical emergencies, including providing first aid – Knows how GPhC LO48 – Understand the principles of risk management – Knows how	SCDHSC0032 Promote health, safety and security in the work setting
3	Personal Development for Pharmacy Technicians	GPhC LO19 – Demonstrate leadership skills within their scope of practice as a trainee – Does	GEN12 Reflect on and evaluate your own values, priorities, interests and effectiveness

BTEC competence-based units	IET references	Indicative NOS references
	GPhC LO20 – Recognise when their performance or the performance of others is putting people at risk and respond appropriately – Does	SCDHSC0023 Develop your own knowledge and practice
	GPhC LO21 – Raise concerns even when it is not easy to do so – Does	SCDHSC0033 Develop your practice through reflection and learning
	GPhC LO22 – Act openly and honestly when things go wrong – Does	
	GPhC LO23 – Effectively use a variety of methods, including feedback, to regularly monitor and reflect on practice, skills and knowledge – Does	
	GPhC LO24 – Carry out a range of relevant continuing professional development (CPD) activities – Does	
	GPhC LO25 – Reflect and act on feedback or concerns, thinking about what can be done to prevent something happening again – Does	
	GPhC LO52 – Take part in the learning and development of others – Does	
	GPhC LO53 – Prioritise time and resources effectively to achieve objectives – Does	
4	Principles of Health Promotion and Wellbeing in	GPhC LO1 – Involve, support and enable every person when making decisions about their health, care and wellbeing – Does	Pharm02 Provide an effective and responsive pharmacy service

BTEC competence-based units		IET references	Indicative NOS references
	Pharmacy Services	GPhC LO4 – Give the person all relevant information in a way they can understand, so they can make informed decisions and choices – Does GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how	HT2 Communicate with individuals about promoting their health and wellbeing PHP13 Provide information to individuals, groups and communities about promoting health and wellbeing PHP15 Encourage behavioural change in people and agencies to promote health and wellbeing PHP16 Work in partnership with others to promote health and wellbeing and reduce risks within settings
5	Contribute to Service Improvement in the Delivery of Pharmacy Services	GPhC LO1 – Involve, support and enable every person when making decisions about their health, care and wellbeing – Does GPhC LO3 – Listen to the person, and understand their needs and what matters to them – Does GPhC LO4 – Give the person all relevant information in a way they can understand, so they can make informed decisions and choices – Does GPhC LO5 – Advise people on the safe and effective use of their medicines and devices – Does	Pharm02 Provide and effective and responsive pharmacy service

BTEC competence-based units		IET references	Indicative NOS references
		GPhC LO6 – Obtain relevant information from people – including patients, carers and other healthcare professionals – and use it appropriately – Does	
		GPhC LO8 – Adapt information and communication to meet the needs of particular audiences – Does	
		GPhC LO9 – Apply the principles of information governance and ensure patient confidentiality – Does	
		GPhC LO14 – Recognise and work within the limits of their knowledge and skills, and refer to others when needed – Does	
		GPhC LO16 – Respond effectively to complaints, incidents and errors and in a manner which demonstrates person-centred care – Does	
5	Contribute to Service Improvement in the Delivery of Pharmacy Services *continued*	GPhC LO17 – Use information to make effective decisions – Does	
		GPhC LO22 – Act openly and honestly when things go wrong – Does	
		GPhC LO25 – Reflect and act on feedback or concerns, thinking about what can be done to prevent something happening again – Does	
		GPhC LO26 – Provide a safe, effective and responsive pharmacy service – Does	

BTEC competence-based units		IET references	Indicative NOS references
		GPhC LO34 – Receive requests for medicines, including prescriptions, and check for their validity, safety and clarity, taking action to deal with any problems – Does	
		GPhC LO45 – Identify and respond effectively to errors and near misses – Does	
		GPhC LO46 – Apply the principles of clinical governance – Does	
		GPhC LO47 – Understand the principles of audit and quality-improvement strategies and how to implement recommendations effectively –Kknows how	
		GPhC LO50 – Communicate and work effectively with members of the multidisciplinary team – Does	
6	Principles for the Management of Pharmaceutical Stock	GPhC LO15 – Understand how to work within the local, regional and national guidelines and policies – Knows how	PHARM12 Order Pharmaceutical Stock
		GPhC LO27 – Take personal responsibility for the legal, safe and efficient supply of medicines – Does	PHARM13 Receive Pharmaceutical Stock
		GPhC LO33 – Order, receive, maintain and supply medicines and other pharmaceutical products safely, legally and effectively – Knows how	PHARM14 Maintain Pharmaceutical Stock
		GPhC LO43 – Safely and legally dispose of medicines and other pharmaceutical products – Knows how	PHARM15 Supply Pharmaceutical Stock

BTEC competence-based units		IET references	Indicative NOS references
7	Undertake Medicines Reconciliation and Supply	GPhC LO1 – Involve, support and enable every person when making decisions about their health, care and wellbeing – Does GPhC LO2 – Optimise a person's medication to achieve the best possible outcomes – Does GPhC LO3 – Listen to the person, and understand their needs and what matters to them – Does GPhC LO6 – Obtain relevant information from people – including patients, carers and other healthcare professionals – and use it appropriately – Does GPhC LO7 – Recognise and value diversity, and respect cultural differences – making sure that every person is treated fairly whatever their values and beliefs – Does	PHARM29 Retrieve and reconcile information about an individual's medicines PHARM33 Order medicines and products for individuals
7	Undertake Medicines Reconciliation and Supply *continued*	GPhC LO8 – Adapt information and communication to meet the needs of particular audiences – Does GPhC LO9 – Apply the principles of information governance and ensure patient confidentiality – Does GPhC LO13 – Apply professional judgement in the best interests of people – Does GPhC LO14 – Recognise and work within the limits of their knowledge and skills, and refer to others when needed – Does	

BTEC competence-based units		IET references	Indicative NOS references
		GPhC LO15 – Understand how to work within the local, regional and national guidelines and policies – Knows how	
		GPhC LO16 – Respond effectively to complaints, incidents and errors and in a way that demonstrates person-centred care – Does	
		GPhC LO17 – Use information to make effective decisions – Does	
		GPhC LO21 – Raise concerns even when it is not easy to do so – Does	
		GPhC LO22 – Act openly and honestly when things go wrong – Does	
7	Undertake Medicines Reconciliation and Supply *continued*	GPhC LO26 – Provide a safe, effective and responsive pharmacy service – Does	
		GPhC LO27 – Take personal responsibility for the legal, safe and efficient supply of medicines – Does	
		GPhC LO30 – Confirm the suitability of a person's medicines for use – Does	
		GPhC LO31 – Accurately retrieve and reconcile information about a person's medicines – Does	

BTEC competence-based units		IET references	Indicative NOS references
		GPhC LO32 – Assess a person's present supply of medicines and order appropriate medicines and products – Does	
		GPhC LO33 – Order, receive, maintain and supply medicines and other pharmaceutical products safely, legally and effectively – Knows how	
		GPhC LO42 – Recognise adverse drug reactions and interactions and respond appropriately – Does	
		GPhC LO43 – Safely and legally dispose of medicines and other pharmaceutical products – Knows how	
		GPhC LO45 – Identify and respond effectively to errors and near misses – Does	
		GPhC LO46 – Apply the principles of clinical governance – Does	
7	Undertake Medicines Reconciliation and Supply *continued*	GPhC LO49 – Demonstrate effective team working – Does	
		GPhC LO50 – Communicate and work effectively with members of the multidisciplinary team – Does	

BTEC competence-based units		IET references	Indicative NOS references
8	Assemble and Check Dispensed Medicines and Products	GPhC LO14 – Recognise and work within the limits of their knowledge and skills, and refer to others when needed – Does	PHARM09 Assemble prescribed items PHARM28 Undertake the final accuracy check of dispensed medicines and products
		GPhC LO18 – Take personal responsibility for health and safety of themselves and others and follow up any concerns about the workplace which might put them at risk – Does	
		GPhC LO20 – Recognise when their performance or the performance of others is putting people at risk and respond appropriately – Does	
		GPhC LO21 – Raise concerns even when it is not easy to do so – Does	
		GPhC LO22 – Act openly and honestly when things go wrong – Does	
		GPhC LO25 – Reflect and act on feedback or concerns, thinking about what can be done to prevent something happening again – Does	
8	Assemble and Check Dispensed Medicines and Products *continued*	GPhC LO26 – Provide a safe, effective and responsive pharmacy service – Does	
		GPhC LO27 – Take personal responsibility for the legal, safe and efficient supply of medicines – Does	
		GPhC LO36 – Accurately assemble prescribed items – Does	

BTEC competence-based units		IET references	Indicative NOS references
		GPhC LO37 – Apply pharmaceutical principles to the safe and effective formulation, preparation and packaging of medicines and products – Knows how	
		GPhC LO40 – Carry out an accuracy check of dispensed medicines and products – Does	
		GPhC LO41 – Accurately perform pharmaceutical calculations to ensure the safety of people – Does	
		GPhC LO45 – Identify and respond effectively to errors and near misses – Does	
		GPhC LO46 – Apply the principles of clinical governance – Does	
		GPhC LO49 – Demonstrate effective team working – Does	
		GPhC LO50 – Communicate and work effectively with members of the multidisciplinary team – Does	
		GPhC LO51 – Check their own and others' work effectively – Does	
9	Receive, Validate and Issue Prescriptions	GPhC LO3 – Listen to the person, and understand their needs and what matters to them – Does	PHARM7 Receive prescriptions
		GPhC LO4 – Give the person all relevant information in a way they can understand, so they can make informed decisions and choices – Does	PHARM8 Confirm prescription validity
			PHARM10 Issue prescribed items

BTEC competence-based units	IET references	Indicative NOS references
	GPhC LO5 – Advise people on the safe and effective use of their medicines and devices – Does	
	GPhC LO6 – Obtain relevant information from people – including patients, carers and other healthcare professionals – and use it appropriately – Does	
	GPhC LO8 – Adapt information and communication to meet the needs of particular audiences – Does	
	GPhC LO9 – Apply the principles of information governance and ensure patient confidentiality – Does	
	GPhC LO13 – Apply professional judgement in the best interests of people – Does	
	GPhC LO14 – Recognise and work within the limits of their knowledge and skills, and refer to others when needed – Does	
	GPhC LO17 – Use information to make effective decisions – Does	
9 Receive, Validate and Issue Prescriptions *continued*	GPhC LO26 – Provide a safe, effective and responsive pharmacy service – Does	
	GPhC LO27 – Take personal responsibility for the legal, safe and efficient supply of medicines – Does	

BTEC competence-based units	IET references	Indicative NOS references
	GPhC LO34 – Receive requests for medicines, including prescriptions, and check for their validity, safety and clarity, taking action to deal with any problems – Does	
	GPhC LO35 – Effectively use systems to support the safe supply of medicines – Does	
	GPhC LO39 – Issue prescribed items safely and effectively and take action to deal with discrepancies – Does	
	GPhC LO42 – Recognise adverse drug reactions and interactions and respond appropriately – Does	
	GPhC LO46 – Apply the principles of clinical governance – Does	
	GPhC LO49 – Demonstrate effective team working – Does	
10 Chemical Principles for Pharmacy Technicians	GPhC LO28 – Understand the basic principles of biology, microbiology, physiology, and chemistry – Knows how	PHARM11 Prepare extemporaneous medicines
	GPhC LO37 – Apply pharmaceutical principles to the safe and effective formulation, preparation and packaging of medicines – Knows how	PHARM17 Manufacture and assemble medicinal products
		PHARM19 Prepare aseptic products
	GPhC LO38 – Ensure quality of ingredients to produce and supply safe and effective medicines and products – Knows how	PHARM20 Prepare documentation and materials for the manufacture and assembly of medicinal products

BTEC competence-based units		IET references	Indicative NOS references
			PHARM21 Prepare documentation and materials for the production of aseptic products
			PHARM23 Check documentation and materials prior to the preparation of aseptic products
11	Biological Principles for Pharmacy Technicians	GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how	PHARM17 Manufacture and assemble medicinal products
12	Medicinal and Non-medicinal Treatments for Gastrointestinal and Nutritional Conditions	GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how	PHARM01 Assist with the provision of a pharmacy service PHARM02 Provide an effective and responsive pharmacy service PHARM03 Respond to pharmaceutical queries and requests for information PHARM04 Provide advice on non-prescribed medicines and products PHARM08 Confirm prescription validity PHARM10 Issue prescribed items PHARM28 Undertake the final accuracy check of dispensed medicines and products

BTEC competence-based units		IET references	Indicative NOS references
			PHARM29 Retrieve and reconcile information about an individual's medicines
			PHARM31 Confirm the suitability of an individual's medicine for use and ensure sufficient supply
			PHARM33 Order medicines and products for individuals
13	Medicinal Treatments for Cardio-respiratory Conditions	GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how	PHARM01 Assist with the provision of a pharmacy service PHARM02 Provide an effective and responsive pharmacy service PHARM03 Respond to pharmaceutical queries and requests for information PHARM04 Provide advice on non-prescribed medicines and products PHARM08 Confirm prescription validity PHARM09 Assemble prescribed items PHARM10 Issue prescribed items PHARM28 Undertake the final accuracy check of dispensed medicines and products PHARM29 Retrieve and reconcile information about an individual's medicines

BTEC competence-based units		IET references	Indicative NOS references
			PHARM31 Confirm the suitability of an individual's medicine for use and ensure sufficient supply
			PHARM32 Assist in the issuing of prescribed items
			PHARM33 Order medicines and products for individuals
14	Medicinal and Non-medicinal Treatments for Malignant Diseases and Musculoskeletal Conditions	GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how	PHARM01 Assist with the provision of a pharmacy service PHARM02 Provide an effective and responsive pharmacy service PHARM03 Respond to pharmaceutical queries and requests for information PHARM04 Provide advice on non-prescribed medicines and products PHARM08 Confirm prescription validity PHARM10 Issue prescribed items PHARM28 Undertake the final accuracy check of dispensed medicines and products PHARM29 Retrieve and reconcile information about an individual's medicines

BTEC competence-based units		IET references	Indicative NOS references
			PHARM31 Confirm the suitability of an individual's medicine for use and ensure sufficient supply
			PHARM33 Order medicines and products for individuals
15	Microbiology for Pharmacy Technicians	GPhC LO28 – Understand the basic principles of biology, microbiology, physiology, and chemistry – Knows how GPhC LO37 – Apply pharmaceutical principles to the safe and effective formulation, preparation and packaging of medicines and products – Knows how	PHARM 08 Confirm prescription validity PHARM 10 Issue prescribed items PHARM 17 Manufacture and assemble medicinal products PHARM 19 Prepare aseptic products PHARM 20 Prepare documentation and materials for the manufacture and assembly of medicinal products PHARM 21 Prepare documentation and materials for the production of aseptic products PHARM 23 Check documentation and materials prior to the preparation of aseptic products PHARM 28 Undertake the final accuracy check of dispensed medicines and products

BTEC competence-based units	IET references	Indicative NOS references
16 Actions and Uses of Medicines	GPhC LO2 – Optimise a person's medication to achieve the best possible outcomes – Does GPhC LO3 – Listen to the person, understand their needs and what matters to them – Does GPhC LO5 – Advise people on the safe and effective use of their medicines and devices – Does GPhC LO6 – Obtain relevant information from people, including patients and other healthcare professionals - and use it appropriately – Does GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how GPhC LO30 – Confirm the suitability of a person's medicines for use – Does GPhC LO31 – Accurately retrieve and reconcile information about a person's medicines – Does GPhC LO32 – Assess a person's present supply of medication and order appropriate medicines and products – Does GPhC LO34 – Receive requests for medicines, including prescriptions, and check for their validity, safety and clarity, taking action to deal with any problems – Does	PHARM11 Prepare extemporaneous medicines, Knowledge and Understanding PHARM17 Manufacture and assemble medicinal products, Knowledge and Understanding PHARM19 Prepare aseptic products, Knowledge and Understanding PHARM20 Prepare documentation and materials for the manufacture and assembly of medicinal products, Knowledge and Understanding PHARM21 Prepare documentation and materials for the production of aseptic products, Knowledge and Understanding PHARM23 Check documentation and materials prior to the preparation of aseptic products, Knowledge and Understanding

BTEC competence-based units		IET references	Indicative NOS references
16	Actions and Uses of Medicines *continued*	GPhC LO36 – Accurately assemble prescribed items – Does GPhC LO39 – Issue prescribed items safely and effectively and take action to deal with discrepancies – Does GPhC LO40 – Carry out an accuracy check of dispensed medicines and products – Does GPhC LO42 – Recognise adverse drug reactions and interactions and respond appropriately – Does	
17	Medicinal and Non-medicinal Treatments for Central Nervous System Conditions	GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how	PHARM01 Assist with the provision of a pharmacy service PHARM02 Provide an effective and responsive pharmacy service PHARM03 Respond to pharmaceutical queries and requests for information PHARM04 Provide advice on non-prescribed medicines and products PHARM08 Confirm prescription validity PHARM09 Assemble prescribed items PHARM10 Issue prescribed items PHARM28 Undertake the final accuracy check of dispensed medicines and products

BTEC competence-based units		IET references	Indicative NOS references
17	Medicinal and Non-medicinal Treatments for Central Nervous System Conditions *Continued*		PHARM29 Retrieve and reconcile information about an individual's medicines
			PHARM31 Confirm the suitability of an individual's medicine for use and ensure sufficient supply
			PHARM32 Assist in the issuing of prescribed items
			PHARM33 Order medicines and products for individuals
18	Medicinal Methods for the Prevention, Protection from and Treatment of Infections	GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how	PHARM02 Provide an effective and responsive pharmacy service
		GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how	PHARM03 Respond to pharmaceutical queries and requests for information
			PHARM04 Provide advice on non-prescribed medicines and products
		GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how	PHARM08 Confirm prescription validity
			PHARM09 Assemble prescribed items
		GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how	PHARM10 Issue prescribed items
			PHARM28 Undertake the final accuracy check of dispensed medicines and products
18	Medicinal Methods for the		PHARM29 Retrieve and reconcile information about an individual's medicines

BTEC competence-based units		IET references	Indicative NOS references
	Prevention, Protection from and Treatment of Infections *Continued*		PHARM31 Confirm the suitability of an individual's medicine for use and ensure sufficient supply
			PHARM33 Order medicines and products for individuals
19	Medicinal Treatments for Endocrine, Gynaecological and Genitourinary Conditions	GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how	PHARM01 Assist with the provision of a pharmacy service
		GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how	PHARM02 Provide an effective and responsive pharmacy service
			PHARM03 Respond to pharmaceutical queries and requests for information
		GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how	PHARM04 Provide advice on non-prescribed medicines and products
		GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how	PHARM08 Confirm prescription validity
			PHARM09 Assemble prescribed items
			PHARM10 Issue prescribed items
			PHARM28 Undertake the final accuracy check of dispensed medicines and products
			PHARM29 Retrieve and reconcile information about an individual's medicines

BTEC competence-based units		IET references	Indicative NOS references
19	Medicinal Treatments for Endocrine, Gynaecological and Genitourinary Conditions *Continued*		PHARM31 Confirm the suitability of an individual's medicine for use and ensure sufficient supply PHARM32 Assist in the issuing of prescribed items PHARM33 Order medicines and products for individuals
20	Medicinal Treatments for Sensory Organ Conditions	GPhC LO10 – Effectively promote healthy lifestyles using available resources and evidence-based techniques – Knows how GPhC LO11 – Be able to provide public health advice and recommend recognised health screening or public health initiatives – Knows how GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how GPhC LO29 – Understand the basic pharmacological principles that apply to the use of medicines in relation to disease processes and the treatment of identified clinical conditions – Knows how	PHARM01 Assist with the provision of a pharmacy service PHARM02 Provide an effective and responsive pharmacy service PHARM03 Respond to pharmaceutical queries and requests for information PHARM04 Provide advice on non-prescribed medicines and products PHARM08 Confirm prescription validity PHARM09 Assemble prescribed items PHARM10 Issue prescribed items PHARM28 Undertake the final accuracy check of dispensed medicines and products

BTEC competence-based units	IET references	Indicative NOS references
20 Medicinal Treatments for Sensory Organ Conditions *Continued*		PHARM29 Retrieve and reconcile information about an individual's medicines PHARM31 Confirm the suitability of an individual's medicine for use and ensure sufficient supply PHARM32 Assist in the issuing of prescribed items PHARM33 Order medicines and products for individuals
21 Principles of Safe Manufacture of Quality Medicines in the Pharmaceutical Environment	GPhC LO28 – Understand the basic principles of biology, microbiology, physiology and chemistry – Knows how GPhC LO37 – Apply pharmaceutical principles to the safe and effective formulation, preparation and packaging of medicines and products – Knows how GPhC LO38 – Ensure quality of ingredients to produce and supply safe and effective medicines and products – Knows how GPhC LO41 – Accurately perform pharmaceutical calculations to ensure safety of people – Does GPhC LO47 – Understand the principles of audit and quality-improvement strategies and how to implement recommendations effectively – Knows how	PHARM20 Prepare documentation and materials for the manufacture and assembly of medicinal products PHARM17 Manufacture and assemble medicinal products

Annexe E: Mapping of the Pharmacy Technician Apprenticeship Standard to the Pearson BTEC Level 3 Diploma in the Principles and Practice for Pharmacy Technicians (integrated apprenticeship) content

The grid below maps the occupation duties and the knowledge, skills and behaviours (KSBs) of the Pharmacy Technician Apprenticeship Standard to the content covered in the on-programme units of learning (*units 1-21*).

KEY

✓ indicates coverage of the occupation duties and knowledge, skills or behaviours in the qualification.

A blank space indicates no coverage of the occupation duties and knowledge, skills or behaviours in the qualification.

BTEC Specialist units Occupation duties from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
1	Achieve the best possible outcome through a person's medicines by managing, ordering, receiving, maintaining and supplying medicines and other pharmaceutical products safely, legally and effectively, whilst meeting the regulatory standards						✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

BTEC Specialist units Occupation duties from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
2	Provide person-centred health advice to all patients	✓						✓														
3	Support the management of the day-to-day operation of the pharmacy, e.g. clinical governance, business operation and processes, including where appropriate the supervision of members of staff			✓		✓	✓		✓													

BTEC Specialist units Occupation duties from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
4	Provide training to pharmacy and the wider healthcare teams, e.g. for a new member of staff			✓																		
5	Maintain a quality service through auditing and evaluating the service and processes, and respond to feedback					✓																✓

BTEC Specialist units / Occupation duties from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
6	Advise people, in a wide range of settings, on the safe and effective use of their medicines and devices				✓	✓		✓		✓												
7	Manage your own professional and personal development			✓																		
8	Ensure patient safety, by promoting safe practices, and the effective use of systems		✓					✓	✓	✓												✓

BTEC Specialist units Occupation duties from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
9	Provide specialist services in response to local and national needs and initiatives				✓			✓														
10	Respond appropriately to medical emergencies		✓																			

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K1	How to ensure legal, regulatory and professional standards are maintained	✓	✓	✓			✓	✓	✓	✓												✓
K2	Understand the limits of their accountability, authority and responsibility	✓	✓	✓				✓	✓	✓												✓
K3	Understand the science of pharmacy, basic pharmacological principles, actions and use of drugs										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

BTEC Specialist units		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
Knowledge from the Apprenticeship Standard																						
K4	How to ensure the quality of ingredients to produce and supply safe and effective medicines and products						✓															✓

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K5	Understand the principles that underpin person-centred care	✓																				
K6	How to apply professional judgement in the best interests of people	✓		✓						✓												

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K7	How to communicate with patients, carers and colleagues using a wide range of options and channels focusing on delivering and improving pharmacy services	✓		✓																		
K8	Understand the principles of information, governance and confidentiality	✓		✓			✓	✓	✓	✓												✓

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K9	How to order, receive, maintain, supply and dispose of medicines and other pharmaceutical products safely, legally and effectively						✓															
K10	How to apply safe working practices in line with health and safety legislation; know how to risk assess processes and manage outcomes		✓						✓													✓

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K11	Know how to effectively deliver key pharmaceutical messages to healthcare team members	✓																				

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K12	Understand the principles of audit and quality-improvement strategies, and how to implement recommendations effectively					✓																✓
K13	Understand the principles of risk management		✓																			

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K14	Understand the most appropriate ways to reflect and act on feedback or concerns, thinking about what can be done to prevent adverse incidents			✓																		
K15	Understand the importance of effective methods of communication to different audiences	✓																				

BTEC Specialist units		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
Knowledge from the Apprenticeship Standard																						
K16	Know how to manage a person's diverse needs and what is important to them	✓																				
K17	Know how to provide and promote advice on healthy lifestyles and initiatives, using available resources and evidence-based techniques				✓																	

BTEC Specialist units	Knowledge from the Apprenticeship Standard	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K18	Understand how to effectively collaborate and work with colleagues and healthcare professionals					✓				✓												

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K19	Know how to undertake effective self-reflection, and how to manage their own personal development			✓																		
K20	Understand the principles of revalidation			✓																		
K21	Understand how to safeguard people, particularly children and vulnerable adults	✓																				

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K22	Understand how to deal with complaints and errors, through effective use of established policies and procedures					✓			✓													
K23	Know how to work within any local, regional and national guidelines and policies	✓		✓	✓		✓	✓	✓	✓												✓

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K24	Know how to apply health and safety legislation in the workplace controls		✓																			✓
K25	Know how to respond appropriately to medical first aid emergencies		✓																			

BTEC Specialist units Knowledge from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
K26	Understand how to effectively supervise other staff within the pharmacy			✓																		
K27	Understand how to effectively manage a patient's medicines by ordering, receiving, maintaining and supplying those medicines and other pharmaceutical products									✓												

BTEC Specialist units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
Skills from the Apprenticeship Standard																					
S1	Recognise and work within their scope of practice and skills					✓		✓	✓	✓												
S2	Use relevant data and information to make effective decisions					✓		✓	✓	✓												
S3	Accurately retrieve and reconcile information about a person's medicines					✓		✓		✓												

BTEC Specialist units	Skills from the Apprenticeship Standard	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S4	Accurately assemble prescribed items								✓													
S5	Issue prescribed items safely and effectively and take action to deal with discrepancies, carry out an accuracy check of dispensed medicines and products								✓	✓												

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S6	Accurately perform pharmaceutical calculations to ensure the safety of people								✓													
S7	Apply the principles of clinical governance and ensure a person's confidentiality							✓	✓	✓												
S8	Assess a person's present supply of medicines and order appropriate medicines and products							✓														

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S9	Receive requests for medicines, including prescriptions, and check for their validity, safety and clarity, taking action to deal with any problems with the person directly									✓												

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S10	Demonstrate operational skills within their scope of practice					✓		✓	✓	✓												
S11	Provide a safe, effective and responsive pharmacy service					✓		✓	✓	✓												
S12	Take personal responsibility for the legal, safe and efficient supply of medicines								✓	✓												

BTEC Specialist units / Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S13	Apply the principles of governance to pharmacy operational processes					✓		✓	✓	✓												
S14	Ensure the confidentiality of patient data							✓		✓												
S15	Communicate and work effectively with members of the multidisciplinary team					✓		✓	✓													

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S16	Explain the impact of audit and evaluation on the quality of pharmacy operations and services					✓																
S17	Engage others in the improvement of processes and systems																					
S18	Effectively use systems to support the safe and effective management and supply of medicines							✓	✓	✓												

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S19	Listen to a person, understand their needs and interpret what matters to them			✓		✓		✓		✓												
S20	Give the person all relevant information and advice in a way they can understand, so they can make informed decisions about their health and wellbeing					✓		✓		✓												

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S21	Optimise a person's medicines to achieve the best possible outcomes							✓		✓												
S22	Obtain relevant information from people – including patients, carers and other healthcare professionals – and use it to optimise care appropriately					✓		✓		✓												

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S23	Adapt information and communication to meet the needs of particular audiences					✓		✓		✓												
S24	Check and review their own and others' work effectively								✓													
S25	Suggest and implement personal goals and methods of improvement			✓																		
S26	Maintain CPD outcomes that meet with regulatory requirements			✓																		

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S27	Identify and respond effectively to errors and near misses								✓													
S28	Ensure effective safeguards are in place particularly for children and vulnerable adults																					
S29	Prioritise time and resources effectively to achieve local and national objectives																					

BTEC Specialist units Skills from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
S30	Respond to medical emergencies																					
S31	Ensure that health and safety controls are embedded and working								✓													
S32	Effectively supervise other members of the team			✓																		

BTEC Specialist units Behaviours from the Apprenticeship Standard		Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
B1	Always act in a manner supportive of the regulatory standards			✓		✓		✓	✓	✓												
B2	Always act with integrity, openness, honesty, especially when things go wrong			✓		✓			✓													
B3	Be reliable, supportive and reflective			✓																		

BTEC Specialist units	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8	Unit 9	Unit 10	Unit 11	Unit 12	Unit 13	Unit 14	Unit 15	Unit 16	Unit 17	Unit 18	Unit 19	Unit 20	Unit 21
Behaviours from the Apprenticeship Standard																					
B4 Respect all individuals' values and confidentiality	✓		✓	✓	✓		✓	✓	✓												
B5 Value diversity and respect cultural differences – making sure that every person is treated fairly and with respect	✓		✓		✓		✓														

Annexe F: Setting effective assignments

Setting the number and structure of assignments

In setting your assignments, you need to work with the learning outcomes and assessment criteria in each unit, and the assessment guidance in each unit gives an indication of the number and type of assignments that you should use.

In designing your own assignment briefs you should bear in mind the following points.

- The number of assignments for a unit must not exceed the number of learning outcomes in the unit. However, you may choose to design assignments covering more than one learning outcome, for example to create a single assignment for the whole unit.

- You may also choose to combine all or parts of different units into single assignments, provided that all units and all their associated learning outcomes are fully addressed in the programme overall. If you choose to take this approach, you need to make sure that apprentices are fully prepared so that they can provide all the required evidence for assessment and that you are able to track achievement in the records.

- A learning outcome must always be assessed as a whole and must not be split into two or more tasks.

- The assignment must be targeted to the learning outcomes but the learning outcomes and their associated criteria are not tasks in themselves. Criteria are expressed in terms of the outcome shown in the evidence.

- You do not have to follow the order of the learning outcomes of a unit in setting assignments, but later learning outcomes often require apprentices to apply the content of earlier learning outcomes and they may require apprentices to draw their learning together.

- As assignments provide a final assessment, they will draw on the content for the learning outcomes. The content is compulsory. The evidence for assessment need not cover every aspect of the content as apprentices will normally be given particular examples, case studies or contexts in their assignments. For example, if an apprentice is explaining how common medicines are used in the treatment of a particular condition, then they will address all the relevant range of content that applies in that instance.

Annexe G: Glossary of verbs used in the assessment criteria for knowledge and understanding

Define

Specify exactly the meaning, nature or scope of something. The use of correct terminology is expected.

Describe

Give a clear account in their own words, including all the relevant information (e.g. qualities, characteristics or events, etc.). Description shows recall and in some cases application. Normally requires breadth of content coverage

Explain

Provide details and give reasons, examples and/or evidence to support an argument or point

Outline

A description setting out the main characteristics or points; write a clear description but without going into too much detail

Compare

Explain the similarities and differences and/ or advantages and disadvantages of two main factors that relate to a situation. This may include saying which is best and why

Assess

Considers all the factors/ events/concepts that apply to a situation to identify those that are most relevant and arrive at a conclusion

Review

Formally assesses work that has been produced. This is to make judgements about whether ideas are good and to make suggestions about improvements and changes.

Annexe H: Gateway Declaration Form

Apprentice name:	
On-programme start date:	
Gateway date:	

Evidence	Y/N	Comments (if applicable)
English and mathematics (Level 2)		
All practical units and assessments on-programme achieved to meet the KSBs of the occupational standard, and requirements of the regulator (GPhC)		
Apprentice has completed and submitted their portfolio to the EPAO		

Employer declaration

I confirm that the apprentice has:

- achieved the occupational knowledge, skills and behaviours required to achieve the qualification

- produced their evidence portfolio to the specified criteria

- achieved the prerequisites listed above and is ready for their end-point assessment.

Name:_____ Date:_____

Signature:_____

Apprentice declaration

I confirm the gateway evidence is my own and I agree to be put forward for my EPA.

Signature:_____	Date:_____

Annexe I: Portfolio Authentication and Certification Declaration Form

Apprentice name:	
Pearson registration number:	

Submission type (first or retake):	**Submission date:**	**Submission time:**

Apprentice declaration

a) I certify that the work submitted for this portfolio is my own. I have clearly referenced any sources used in the work. I understand that false declaration is a form of malpractice.

b) I give my permission for Pearson to claim for my overall apprenticeship certificate, following confirmation of my successful achievement of this EPA.

Apprentice signature:_____ Date:_____

Tutor/trainer declaration

I confirm that the work presented for the portfolio is the apprentice's own.

I confirm that the work was completed under the specified conditions and context, and the apprentice's evidence is authentic.

Tutor/trainer name:

Tutor/trainer signature:_____ Date:_____