

# Diploma in Ophthalmic Dispensing Syllabus 2023

## Conditions of Admission

Theoretical and Practical Assessment Requirements  
and Learning Outcomes

Level 6 Diploma in  
Ophthalmic Dispensing (QCF)





## Conditions of admission

- A.** The minimum entry standard is the achievement of grade 4 (equivalent grade C) or higher in the General Certificate of Secondary Education in the following subjects:

- Mathematics
- English
- a science based subject, and
- two other subjects

The ABDO awarding body may consider the results obtained in an equivalent examination. The teaching institutions may require a higher standard for admission to their courses.

The ABDO awarding body may agree to waive this educational requirement in respect of persons who have had at least ten years practical experience in optics.

- B.** Students must generally undertake their training in the practice of ophthalmic dispensing in a suitable, pre-approved environment such as an ophthalmic practice or a hospital clinic, under the supervision of a suitably registered practitioner.
- C.** The Final Qualifying Examination (FQE practical) may be taken on completion of at least three years of study undertaken at an ABDO approved teaching institution.
- D.** It is a requirement of the General Optical Council (GOC) that those seeking registration must have had at least 1,600 hours supervised experience in practice, which the examining body is required to certify prior to sitting the FQE.
- E.** To be able to make this certification ABDO lays down a schedule of work and experience, which the student must undergo during the Pre-Qualification Period (PQP). The schedule is sent to the student and on receipt, the registered supervisor must complete an undertaking that the work and experience detailed will be given.

On conclusion of the PQP the supervisor then declares that the work schedule required has been observed.

- F.** The PQP may commence from the start of the ophthalmic dispensing course, subject to receipt of supervisor declaration, and the date of commencement issued by ABDO. It is therefore important, and in the student's interest, that ABDO is notified of the name and address of their supervisor and practice immediately when a post is obtained.

- G.** Certain assessments taken at training institutions may form an exemption to one or more theoretical units and therefore students should understand that membership of both the ABDO and GOC must be continuous throughout their period of study in order for those assessments to be considered part of the final award.

- H.** The student acknowledges and accepts the conditions governing issue of diplomas, such as a lapse in ABDO membership would mean that the suffix FBDO could no longer be used and the diploma will need to be returned to ABDO.

## Exemptions

Exemption from any ABDO examination shall be at the discretion of the Head of Professional Qualifications and Education and considered on an individual basis.

There are **no** exemptions from unit 4, Ophthalmic Dispensing Practice and unit 14 Advanced Ophthalmic Dispensing Practice. Any exemptions from the remaining units would only be considered, on receipt of a written application and submitted evidence.

## Re-admission to examinations

### Practical/Theory examinations

Students who fail one or more units three times will not be admitted for re-examination until they have evidenced proof that a further period of sustained study has been undertaken as approved by the Head of Professional Qualifications & Education. One further attempt will then be permitted, if this fourth and final attempt is unsuccessful, the student will no longer be allowed to continue the course or sit any further assessments, unless studies are resumed from year one.

# Syllabus Index

The maximum number of attempts at a unit of the syllabus taken as a whole, or in parts, is FOUR. (ABDO's four attempts policy is available on the website).

Students should be aware that there is a seven year rule in effect of examination results where the diploma has not been awarded. This ruling commences from the first examination sat. ABDO will endeavour to contact students who are at risk of results expiring.

The syllabus is reviewed on a quinquennial basis. Any changes to the examination content or format will be published in the optical press and affected students will receive direct correspondence from ABDO to the address on the membership database.

Four successive attempts will be offered at the current syllabus before changes are made, over a two-year period.

## Closing dates

The closing dates for examination applications are published on the examinations section of the ABDO website. Students will also be notified when the on-line application forms are available on their individual membership page.

## Boards of examiners

There are two examination boards that contribute to the awarding of the Level 6 Diploma in Ophthalmic Dispensing, in accordance with the published assessment regulations. The examination board for theory examinations is responsible for all theory results and the examination board for practical examinations is responsible for all practical results.

## GOC learning outcomes mapping

*The GOC learning outcomes can be found mapped against each part of the syllabus in blue. The outcomes shown relate to the teaching, and may not necessarily indicate where an outcome is signed off.*

Where a learning outcome is not mapped against the syllabus, the theoretical knowledge will still be assessed as certain background learning is essential in order to be able to demonstrate competence in all learning outcomes.

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# Unit Assessment Format



Unit	Title	Format	Time allowed
<b>YEAR ONE</b>			
Unit 1	Theory of General Optics	Theory examination (online)	1½ hours
Unit 2	Theory of Ophthalmic Lenses	Theory examination (online)	1½ hours
Unit 3	Patient Centred Care	Portfolio case records, practice visit and Viva	N/A
Unit 4	Ophthalmic Dispensing Practice	Preliminary Qualifying Examination (PQE) A combination of practical and Viva assessments	3½ hours
<b>YEAR TWO</b>			
Unit 5	Theory in Ophthalmic Dispensing	Theory examination (online)	1½ hours
Unit 6	Advanced Theory of Ophthalmic Lenses	Theory examination (online)	1½ hours
Unit 7	Standards of Practice	Theory examination (online), practice visit and FQE assessment	1 hour
Unit 8	Ocular Anatomy & Pathology	Theory examination (online), portfolio case records and FQE Assessment	2 hours
Unit 9	Paediatric Dispensing	Case records, FQE assessment and practice visit	N/A
Unit 10	Practitioner Development	A combination of portfolio case records, literature review, evidence of CPD experience and evidence of delivering training	N/A
<b>YEAR THREE</b>			
Unit 11	The Assessment & Management of Refractive Errors	Theory examination (online), portfolio case records and FQE assessment	2 hours
Unit 12	The Assessment & Management of Visual Impairment	Theory examination (online) portfolio case records and FQE assessment	2 hours
Unit 13	The Principles of Contact Lens Wear	Theory examination (online) and portfolio case records	1 hour
Unit 14	Advanced Ophthalmic Dispensing Practice	Final Qualifying Examination (FQE). A combination of practical and Viva assessments	5 hours
Unit 15	Portfolio & Practice Visit	Case record submission and practice visit assessment	N/A

# Theory of General Optics

## Unit 1

### A. Propagation of light formation

The expected learning outcome is that the student should appreciate 'Light travels in a straight line'.

- A1. Draw a graph of displacement against time and displacement against distance for a continuous wave.
- A2. Define the terms velocity, frequency, wavelength, and amplitude.
- A3. Differentiate between waves which are transverse and those which are longitudinal.
- A4. Recall and use the relationship:  
$$\text{velocity} = \text{frequency} \times \text{wavelength}.$$
- A5. Define what is meant by a wavefront.
- A6. Draw diagrams using groups of rays and wavefronts to illustrate converging, diverging and parallel pencils of rays.
- A7. Define the term vergence and explain the associated sign convention.
- A8. Define the unit for vergence.
- A9. Define the term curvature of a wavefront and explain the associated sign convention.
- A10. Draw a diagram showing the formation of the image produced by a pinhole camera.
- A11. List the properties of the image produced by a pinhole camera.
- A12. State what effect varying the size and shape of the pinhole will have on the image properties.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### B. Reflection

The expected learning outcome is that the student understands the formation of the images produced by reflection at plane and curved mirrors.

**Students will be expected to:**

- B1. Explain the difference between regular (specular) and diffuse reflection.
- B2. Define the terms incident ray, normal and reflected ray.
- B3. Recall the laws of reflection.
- B4. Construct a ray diagram showing the formation of a virtual image produced by a plane mirror and describe the nature of the image produced.
- B5. Describe convex and concave spherical mirrors.
- B6. Define the terms pole (or vertex), centre of curvature, principal axis, and radius of curvature of a curved mirror.
- B7. Define the terms principal focus and focal length of convex and concave mirrors.
- B8. Derive the relationship between focal length and radius of curvature for a curved mirror.
- B9. Show that there is only one type of image, for all positions of a real object, produced by a convex mirror.
- B10. Use mirror formulae to solve numerical problems.
- B11. Apply the conjugate foci relationship to solve mirror problems and to recall that:

$$F = -\frac{n}{f} \quad \text{or} \quad F = -2nr$$

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

# Theory of General Optics

## Unit 1 - continued

### C. Refraction at a plane surface

The expected learning outcome is that the student appreciates that light may bend when travelling from one medium to another and can recognise the phenomenon of total internal reflection.

#### *Students will be expected to:*

- C1. Define the terms incident, normal and refracted ray, angle of incidence and angle of refraction.
- C2. Recall the laws of refraction.
- C3. Explain the terms relative refractive index and absolute refractive index.
- C4. Use a graphical construction for a ray trace for refraction.
- C5. Draw a diagram showing refraction produced by a parallel sided glass block.
- C6. Calculate refraction produced by a parallel sided glass block.
- C7. Calculate the lateral and horizontal displacement produced by refraction through a parallel sided glass block.
- C8. Recall the general form of Snell's Law.
- C9. Solve problems using Snell's Law.
- C10. Show that the refractive index of a medium in air is equal to real thickness divided by reduced thickness.
- C11. Recall that the apparent thickness of several layers of different parallel sided media is equal to the sum of the individual reduced thicknesses.
- C12. Define critical angle.
- C13. Show that:
$$\sin i_c = \frac{n'}{n}$$
and use this to calculate various values of  $i_c$ .
- C14. Draw a ray diagram illustrating total internal reflection.
- C15. Solve numerical examples, which involve total internal reflection

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*



## Unit 1 - continued

- C16. Explain the terms prism, principal section of a prism, refracting faces of a prism and apical angle of a prism.
- C17. Construct a ray trace through a triangular prism and demonstrate use of the formula:
- $$d = i_1 + i'_2 - a$$
- C18. Use Snell's Law and the formula in C17 to calculate values of deviation for given values of incidence.
- C19. Use Snell's Law and recall that  $a = i_1 + i'_2$  to calculate values of angle of incidence for a given angle of deviation or given angle of incidence/refraction at the second surface.
- C20. Trace a ray through a small angled prism and demonstrate displacement.
- C21. Explain in simple terms dispersion through a prism and understand the basis of chromatic aberration.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

## D. Refraction at curved surfaces

The expected learning outcome is that students should understand the formation of images by converging and diverging lenses, be familiar with various lens forms and the concept of the equivalent thin lens.

### *Students will be expected to:*

- D1. Define converging and diverging spherical refracting surfaces.
- D2. Define the terms vertex, centre of curvature, and principal axis of a surface.
- D3. Apply the fundamental paraxial equation for refraction at a single spherical surface.
- D4. Recall the sign convention applied to distances and angles associated with refraction at a single spherical surface.
- D5. Define the power of a refracting surface and recall that:

$$F = \frac{(n' - n)}{r}$$

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

# Theory of General Optics

## Unit 1 - continued

- D6. Define linear magnification and calculate its value.
- D7. Calculate the powers of convex and concave surfaces.
- D8. Calculate image position and image size by means of the fundamental paraxial equation and magnification formulae.
- D9. Describe the nature of an image.
- D10. Draw diagrams illustrating the first and second focal lengths of converging and diverging surfaces.
- D11. Recall the construction rays necessary to draw ray diagrams to scale to show the formation of images produced by a single convex refracting surface and by a single concave refracting surface and to use these rays to produce diagrams for the images produced by all possible positions of the object.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

## E. Thin lenses

***The expected learning outcome is that students should be able to:***

- E1. Describe various converging lens forms and diverging lens forms.
- E2. Use diagrams to explain the prismatic representation of converging and diverging lenses.
- E3. Define the terms front vertex, back vertex, front and back vertex power, optical axis (or principal axis), centre thickness of a lens and radii of curvature of front and back surfaces, centres of curvature of front and back surface.
- E4. Define the term optical centre.
- E5. Draw diagrams showing the positions of the first and second principal focal points and the first and second focal lengths for both converging and diverging lenses.
- E6. Recall the construction rays necessary to draw ray diagrams to show the formation of images produced by a single thin converging or diverging lens for all possible positions of the object and describe the nature of the image.
- E7. Apply the conjugate foci formula for a single thin lens.
- E8. State the equation giving the power of a thin lens in air in terms of its surface curvatures or radii of curvature.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

## Unit 1 - continued

E9. Recall that:

$$F = \frac{-n}{f} \quad \text{and} \quad F = \frac{n}{f'}$$

E10. Relate the position of a single thin lens to the concept of effectivity.

E11. Trace a ray through a lens system involving two or more lenses.

E12. Appreciate that it is possible to replace a system of separated thin lenses with an equivalent thin lens.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

## F. Photometry

*The expected learning outcome is that students should be able to:*

F1. Define the illuminance at a point on a surface.

F2. Recall levels of illuminance required for specific job applications.

F3. Recall the laws of photometry and use the resulting equations to solve numerical problems.

F4. Define the quantity reflectance and solve numerical problems involving this quantity.

F5. Define transmittance of a transparent body (and be familiar with the fact that this varies according to wavelength of radiation used) and solve numerical problems involving this quantity.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

# Theory of General Optics

## Unit 1 - *continued*

### G. Colour

*The expected learning outcome is that students should be able to:*

- G1. Define hue, luminosity and saturation.
- G2. State the limits of the visible spectrum.
- G3. Relate the colour sense to wavelength, indicating approximately the 'blue, green and red' regions of the spectrum.
- G4. Define primary and complementary colours.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

#### ASSESSMENT FORMAT

Unit	1		
Title	Theory of General Optics		
Format	Theory examination (online)		
Time allowed	1½ hours	Theory pass mark	40%
Year	1		

### A. Lens materials

The expected learning outcome is that the student should appreciate the different types of materials used in lens manufacture. They should be aware of some of the important physical properties of the material i.e., density, Abbe number, refractive index, curve variation factor.

#### *Students will be expected to:*

- A1. Describe the important physical properties of the various materials from which specific lenses are made.
- A2. Give typical values for the various physical properties of the materials used for ophthalmic lenses.
- A3. List the advantages and disadvantages of the various glass and plastics materials.
- A4. Understand the different methods involved in lens manufacture.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### B. Lens form

The expected learning outcome is that the student understands the changes in vergence associated with a thin ophthalmic lens and comprehends the various forms in which such a lens may be manufactured.

#### *Students will be expected to:*

- B1. Define what is meant by spherical lenses and spherical lens surfaces.
- B2. Indicate on a diagram, with radii of curvature marked, converging and diverging forms of a spherical lens.
- B3. Use thin lens theory to recall the expression for the power of a thin lens.
- B4. Use the relationship in B3 or individual surface power formulae to calculate:  
equi-convex, plano-convex, meniscus, equi-concave, plano-concave lens forms and lens surface radii.
- B5. Know what is meant by the term base curve as applied to the form of an ophthalmic lens.
- B6. Know what is meant by the terms flat and curved as applied to the form of an ophthalmic lens.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

# Theory of Ophthalmic Lenses

## Unit 2 - continued

### C. Parameters of sphero-cylindrical lenses

The expected learning outcome is that, with the aid of diagrams, students will appreciate what is meant by a flat astigmatic lens.

**Students will be expected to:**

- C1. Define what is meant by a cylindrical surface.
- C2. Define the terms principal meridians and power meridians.
- C3. State what is meant by standard axis notation.
- C4. Write a lens power in crossed cylinder form, or sph-cyl form, the latter being in either plus or minus cyl form.
- C5. Transpose from one form of prescription to another.
- C6. Solve numerical calculations involving several flat thin astigmatic lenses with compatible axes in contact.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### D. Parameters of toric lenses

The expected learning outcome is that the student will be able to distinguish between the different forms of toric lenses and appreciate their function.

**Students will be expected to:**

- D1. Define what is meant by a toroidal surface.
- D2. Define the terms base curve and cross curve, as applied to a toroidal surface.
- D3. Define the term toric lens.
- D4. Explain what is meant by a plus base toric lens and a minus base toric lens.
- D5. Transpose from one type of toric lens:
  - i. onto a given base curve (plus or minus)
  - ii. onto a given sphere curve (plus or minus).
- D6. Transpose from a given toric form into cross cylinder or sphere/cyl form.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### E. Line foci and disc of least confusion

The expected learning outcome is that the student recognises the formation of images produced by an astigmatic lens:

*Students will be expected to:*

- E1. Draw a diagram showing the nature of the pencil refracted by a cylindrical lens.
- E2. Draw a diagram showing the nature of the pencil refracted by a sph-cyl lens.
- E3. Apply the vergence formulae used to locate the positions of the line foci, the length and direction of the line foci, and the position and diameter of the disc of least confusion.
- E4. Use thin lens theory to calculate the prescription of a thin lens, placed in contact with a given astigmatic lens, to give a specified type of image in a specified plane.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### F. Lens measure and lens thickness

The expected learning outcome is that the student appreciates the use of the lens measure and is able to relate edge and centre thickness with a given lens prescription.

*Students will be expected to:*

- F1. Explain the structure and associated theory of the lens measure.
- F2. Calculate a surface power for materials other than that for which the measure is calibrated.
- F3. State both the accurate and approximate sag formulae.
- F4. Calculate edge thickness and thickness at the geometrical centre or optical centre for:
  - i. Spherical lenses
  - ii. Astigmatic lenses
  - iii. The above lenses combined with prism or decentration.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

# Theory of Ophthalmic Lenses

## Unit 2 - continued

### G. Ophthalmic prisms and prismatic effects

The expected learning outcome is that the student will, for ophthalmic prisms and prismatic effects, be able to:

- G1. Define the terms:
  - i. Refracting edge
  - ii. Principal section
  - iii. Apical angle
- G2. Derive the relationship for a small angled prism:  $d = (n-1)a$
- G3. Define the prism dioptre.
- G4. Use the relationships of G2 and G3 to solve numerical examples on deviation (in degrees or prism dioptres) produced by a small angled prism.
- G5. Describe how to construct a tangent scale capable of measuring the:
  - i. Power of a prism in prism dioptres
  - ii. Deviation produced (in degrees)
  - iii. Apical angle (in degrees)
- G6. Apply the prism thickness difference formula to solve numerical examples
$$g = \frac{Pd}{100(n-1)}$$
- G7. Compound multiple prisms into a single resultant.
- G8. Resolve a single prism into two components using either a graphical method or calculation.
- G9. Split prism power between the two eyes.
- G10. Describe the action of the rotary prism.
- G11. Apply Prentice's Rule to calculate the magnitude and direction of the prismatic effect at any point on a lens. Either the decentration or the distance of the point from the optical centre of the lens may be given. The lenses specified may be positive or negative spheres, plano-cyls or sph-cyl (but with the cylinder axis restricted to 90 and 180). The prismatic effect may be required as a single resultant value or as vertical and horizontal components.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*



# Theory of Ophthalmic Lenses



## Unit 2 - continued

- G12. Apply Prentice's Rule to calculate the magnitude and direction of decentration required to produce a specified amount of prism for a given prescription for the types of lenses listed in G11. The decentration may be required as a single resultant value or as vertical and horizontal components.
- G13. Calculate the minimum size uncut required using the stated horizontal lens size and the single resultant decentration as calculated in G12, limited to round and/or oval lenses.
- G14. Explain what is meant by differential (relative) prism.
- G15. Find the differential prism for a pair of lenses (for astigmatic lenses, axes will be restricted to 90 and 180).

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

## H. Elements of ametropia

The expected learning outcome is that the student will understand the terms used to describe the elements of ametropia and be able to:

- H1. Define ametropia, emmetropia, myopia and hypermetropia.
- H2. Define and represent on a diagram the far point of a reduced eye.
- H3. Draw diagrams, showing the positions of the far point and the spectacle lens second focal point, which demonstrate how spherical ametropia is corrected.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### ASSESSMENT FORMAT

Unit	2		
Title	Theory of Ophthalmic Lenses		
Format	Theory examination (online)		
Time allowed	1 ½ hours	Theory pass mark	40%
Year	3		

# Patient-Centred Care

## Unit 3

### A. Communication in ophthalmic dispensing

The expected learning outcome is that the students should be able to demonstrate the ability to employ an adaptive and personalised approach to patient care, considering the patient's social, clinical, personal and cultural needs, collaborating effectively with other professionals:

- A1. Demonstrate communication effectively with the patient using verbal, non-verbal and written skills.
- A2. Explain how to take into consideration the patients' physical, emotional, intellectual, and cultural background.
- A3. Take accurate history from patients with a range of ophthalmic problems and needs.
- A4. Demonstrate how to deal effectively with patient concerns and complaints.
- A5. Explain the importance and significance of family history, signs, and symptoms.
- A6. Explain the importance of patient's health, status, medication, work, sports, lifestyle and special skills to ophthalmic dispensing.
- A7. Demonstrate appropriate communication skills when discussing ophthalmic matters with patients, taking into account relevant individual characteristics.
- A8. Explain how to deal with patients' fears, anxieties and concerns about their visual welfare during the eye examination and its outcome.
- A9. Discuss how to deal with a patient who needs information about systemic disease and its ocular impact, its treatment and the possible ocular side effects of medication.
- A10. Describe how to recognise the patient's expectations and aspirations and managing situations where these cannot be met.
- A11. Describe how to communicate with patients who have poor or non-verbal communication skills or those who are confused, reticent or who might mislead.

#### ASSESSMENT FORMAT

Unit	3
Title	Patient Centred Care
Format	A combination of portfolio case records, practice visit and Unit 14 practical Final Qualifying Examination
Pass mark	Practical pass mark 60% per section
Year	1

### Related Learning Outcome

#### OUTCOME 1: PERSON CENTRED CARE

**O1.1** Actively listens to patients and their carers to ensure patients are involved in and are at the heart of decisions made about patients' care.

**O1.2** Manages desired health outcomes of patients, taking into consideration any relevant medical, family and social history of the patient, which may include personal beliefs or cultural factors.

**O1.4** Ensures high quality care is delivered and puts into place adaptative measures as needed for different environments (such as domiciliary, prisons and special schools).

**O1.8** Refers and signposts as necessary to sight loss and other relevant health services.

#### OUTCOME 2: COMMUNICATION

**O2.1** Conducts communications in a sensitive and supportive manner adapting their communication approach and style to meet the needs of patients, carers, health and care colleagues and the public.

**O2.2** Acts upon non-verbal cues from patients or carers that could indicate discomfort, a lack of understanding or an inability to give informed consent.

**O2.3** Communicates effectively within a multi-disciplinary healthcare team and works collaboratively for the benefit of the patient.

**O2.4** Critically reflects on how they communicate with a range of people.

#### OUTCOME 3: CLINICAL PRACTICE

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

**O3.5a (iv)** Accurately identifies patients' conditions and their potential need for medical referral in a timely way, including when urgent or emergency attention is required.

#### OUTCOME 4: ETHICS AND STANDARDS

**O4.4** Applies the relevant national law and takes appropriate actions i) to gain consent and ii) if consent cannot be obtained or is withdrawn.

**O4.9** Complies with equality and human rights legislation, demonstrates inclusion and respects diversity.

**O4.10** Understands the patient or carer's right to complain without prejudicing the standard of care provided.

**O4.13** Manages situations under which patient confidentiality may be breached in order to protect a patient or the public, in line with relevant guidance on disclosing confidential information and/or with the patient's consent.

**O4.15** Maintains professional boundaries with patients and others, taking into consideration the additional needs of vulnerable people and specific requests/requirements.

**O4.18** Provides clarity on services available and any associated payments.

#### OUTCOME 5: RISK

**O5.2** Knows how to manage complaints, incidents or errors in an effective manner.

### Section A: Single vision lenses

#### A1. Lens measure

The expected learning outcome is that the candidate should be able to:

- A1.1 Test a lens measure for zero error, and compensate for any error in the measurements taken or recalibrate the lens measure.
- A1.2 Locate, measure, and record the base curve, cross curve and sphere curve on a toric lens.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

#### A2. Single vision focimetry

The expected learning outcome is that the candidate should, for spherical and astigmatic lenses as appropriate, be able to:

- A2.1 Locate and mark the optical centre of a lens and record its position.
- A2.2 Measure and record the components of a spherical and astigmatic lens.

**NB:** The learning outcomes in A2 must be achieved using a telescope type manual focimeter.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

#### A3. Hand neutralisation

The expected learning outcome is that the candidate should, for spherical and astigmatic lenses as appropriate, be able to:

- A3.1 Recognise transverse movement.
- A3.2 Recognise scissors movement.
- A3.3 Locate and mark the principal meridians of a lens.
- A3.4 Locate and mark the optical centre of a lens and record its position.
- A3.5 Neutralise by hand and record the power of a spherical lens.
- A3.6 Neutralise by hand and record the prescription of an astigmatic lens.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

# Ophthalmic Dispensing Practice

## Unit 4 – Preliminarily Qualifying Examination (PQE) - continued

### Section B: Frame measurements and frame materials

#### B1. Frame measurements

The expected learning outcome is that the student should be able to locate, measure and record for fixed pad bridge frames, regular bridge frames and frames with pads on arms as appropriate:

B1.2	Box lens size.	B1.11	Splay angle of pad.
B1.3	Distance between lenses.	B1.12	Frontal angle of pad.
B1.4	Distance between rims at 10mm and 15mm below crest.	B1.13	Angle of side.
B1.5	Bridge Width.	B1.14	Length to bend.
B1.6	Bridge Height.	B1.15	Length of drop.
B1.7	Crest Height.	B1.16	Downward angle of drop.
B1.8	Apical Radius.	B1.17	Total length of side
B1.9	Bridge Projection.	B1.18	Frame head width.
B1.10	Distance between pad centres.	B1.19	Frame temple width.
		B1.20	Let-back of side.

### Related Learning Outcome

#### OUTCOME 3: CLINICAL PRACTICE

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

#### B2. Frame construction and materials

The expected learning outcome is that the candidate should be able to:

- B2.1 Identify current and obsolete frame materials and describe their properties.
- B2.2 Recall terms used in the construction of spectacle frames.
- B2.3 Describe the construction of spectacle frames and mounts designed for adults and children.
- B2.4 Describe the raw materials used in spectacle frame manufacture.

#### OUTCOME 3: CLINICAL PRACTICE

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### **Section C:** ***Spectacle fitting and facial measurements***

#### **C1. Frame adjustments and tools**

The expected learning outcome is that the candidate should be able to demonstrate:

- C1.1 Determine the need for adjustments and the order in which they should be carried out.
- C1.2 Demonstrate the handling and adjustment of all types of spectacle frames and materials.
- C1.3 Identify tools used in the repair, adaption, and adjustment of spectacle frames.
- C1.4 Explain any safety issues surrounding the use of tools.
- C1.5 Demonstrate the use of tools.

#### **Related Learning Outcome**

##### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

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#### **C2. Facial Measurements**

- C2.1 Measure the interpupillary distance.
- C2.2 Measure monocular interpupillary distances.
- C2.3 Measure crest height.
- C2.4 Measure bridge projection.
- C2.5 Measure apical radius.
- C2.6 Measure distance between rims @10mm and 15mm below crest.
- C2.7 Measure frontal angle.
- C2.8 Measure splay angle.
- C2.9 Measure front to bend.
- C2.10 Measure head width and temple width.

##### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

# Ophthalmic Dispensing Practice

## Unit 4 – Preliminary Qualifying Examination (PQE) - *continued*

### **Section D: Single vision prescription analysis and lens description**

The expected learning outcome is that the candidate should, at preliminary level, be able to:

- D1. Analyse and interpret verbal, non-verbal and written information.
- D2. Demonstrate effective questioning and listening skills.
- D3. Identify incomplete, inaccurate and ambiguous prescriptions.
- D4. Recall spectacle lens data and availability.
- D5. Suggest suitable lens types for a given prescription.
- D6. Explain the relationship between prescriptions for different distances.
- D7. Explain the use of terms relating to spherical and astigmatic ametropia.
- D8. Explain how and why prismatic correction may be included in a prescription.
- D9. Describe mechanical and optical properties of spectacle lenses.
- D10. Describe tints, coatings and lens treatments.
- D11. Identify where personal eye protection may be required.
- D12. Discuss frames and lenses suitable for personal eye protection.
- D13. Provide a description of given spectacle lenses.

### **Related Learning Outcome**

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

### **ASSESSMENT FORMAT**

<b>Unit</b>	4		
<b>Title</b>	Ophthalmic Dispensing Practice		
<b>Format</b>	Preliminary Qualifying Examination (PQE) Practical Assessment		
<b>Time allowed</b>	3 ½ hours	<b>Practical pass mark</b>	50% Per Section
<b>Year</b>	1		

## Unit 5

### A. Fields of view

The expected learning outcome is that the student should understand the limitations imposed on the field of vision of an ametropes and be able to:

- A1. Explain the field of vision of the eye and the effect of fixation on the field.
- A2. Describe factors affecting the field of view of spectacle lenses.
- A3. Describe and calculate the extent of the apparent field of view and real field of view.
- A4. Describe the jack-in-the-box effect.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### B. Tinted, coated and protective lenses

The expected learning outcome is that the student should recognise where general safety and protection from harmful radiations are important in patient welfare and be able to:

- B1. Describe sources of radiation and the effects upon the various components of the eye.
- B2. Recall wavelength transmittance of the ocular media.
- B3. Define and explain spectral transmittance and luminous transmittance.
- B4. Explain how transmission curves are constructed for a range of glass, plastics and filters.
- B5. Advise on the use of types of tints and coatings for specific applications.
- B6. Describe methods of producing tinted lenses.
- B7. Describe photochromic filters.
- B8. Describe the formation of reflections and ghost images from spectacle lenses.
- B9. Define plane polarised light and explain how it may be produced.
- B10. Explain the significance of the Brewster angle.
- B11. Describe the manufacture and use of polarising lenses.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

# Advanced Theory in Ophthalmic Dispensing

## Unit 5 - continued

- B12. Describe the manufacture and application of hydrophobic and scratch resistance coatings.
- B13. Calculate surface reflectance.
- B14. Describe methods of reducing unwanted reflections.
- B15. Describe the difference between constructive and destructive interference.
- B16. Explain the path and amplitude conditions as they relate to destructive interference.
- B17. Describe how single and multi-layer anti reflection coatings can be applied to a spectacle lens.
- B18. Describe the principles of impact resistant lenses and their application.
- B19. Recall the general provisions of the relevant standards relating to safety spectacles and associated test procedures.

## Related Learning Outcome

### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

## C. Multifocal lenses

The expected learning outcome is that the student should be able to dispense multifocal spectacle lenses safely and appropriately, and be able to:

- C1. Define terms used to locate and measure bifocals.
- C2. Recall the significance of distance and near visual points.
- C3. Describe the mechanical requirements of bifocals.
- C4. Explain jump and the criterion for no-jump bifocals.
- C5. Calculate jump in any bifocal lens.
- C6. Determine the position of the optical centre of the near portion and explain its significance.
- C7. Describe the use of split bifocals, cement bifocals, upcurve bifocals, bonded bifocals, and blended bifocals.
- C8. Describe fused bifocals, their method of manufacture, use and limitations.
- C9. Describe solid bifocals, their method of manufacture and use.

### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*



# Advanced Theory in Ophthalmic Dispensing

## Unit 5 - continued

- C10. Describe types of lenticular and blended lenticular bifocals.
- C11. Explain the need for multifocal and progressive power lenses.
- C12. Determine the intermediate addition for a given range of vision.
- C13. Describe occupational progressives, degressives and enhanced reading lenses and explain their advantages and disadvantages.
- C14. Describe types of trifocals available and explain their advantages and disadvantages.
- C15. Describe types of progressive power lenses and explain the advantages and disadvantages of the progression zone.
- C16. Describe the impact of changing the length of the progressive corridor in terms of the regions of indistinct vision.
- C17. Describe the impact of changing the addition power on the regions of indistinct vision.
- C18. Describe sketch and explain the permanent and temporary markings found on a typical progressive power lens.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

## D. Special lenses

The expected learning outcome is that the student should be able to identify situations where special types of lenses may be required, and be able to:

- D1. Describe and explain the principles of the following:
  - Lenses for use under water
  - Recumbent prisms
  - Fresnel lenses
  - Fresnel prisms
  - Chavasse lenses
  - Frosted lenses
  - Lenses for occlusion
  - Trigeminal spectacles
  - Ptosis spectacles
  - Adaptive lenses

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

# Advanced Theory in Ophthalmic Dispensing

## Unit 5 - *continued*

### E. Visual Task Analysis and Dispensing

The expected learning outcome is that the student should understand the need to supply the correct optical appliance for a specific task, and be able to:

- E1. Complete a comprehensive visual task analysis to include but not limited to:
  - Task size
  - Working distance
  - Main working positions
  - Size of working area
  - Head movements
  - Direction of gaze
  - Change in direction of gaze
  - Movement of the task
  - Binocular vision and stereoscopic requirements
  - Colour vision
  - Visual fields
  - Visibility/contrast
  - Lighting – adequacy and suitability
  - Potential hazards
  - Ocular hazards and eye protection requirements
- E2. Interprets the resultant data and justifies the dispensed optical appliance.
- E3. Manages cases of non-tolerance

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

## Unit 5 - continued

### F. Dispensing high powered lenses

The expected learning outcome is that the student should understand the optical, mechanical, and cosmetic problems, which are likely to arise when dispensing high power spectacle lenses, and be able to:

- F1. Identify where reduced aperture lenses may be beneficial.
- F2. Describe types of lenticular and blended lenticular lenses.
- F3. Describe the effects of high-power cylinders on lens thickness.
- F4. Recall the relationship between the aperture diameter and the thickness of a lenticular lens.
- F5. Calculate the edge thickness for a given concave lenticular aperture.
- F6. Explain the need for accurate centration.
- F7. Describe the effects of aspherising lens surfaces.
- F8. Explain the link between reduced thickness and increased refractive index.
- F9. Describe the aberrations which may become apparent in high powers and how these may be reduced.
- F10. Define frame fitting and vertex distance and explain its significance for high lens powers.
- F11. Explain the effects of pantoscopic angle and face form angle on the prescription.
- F12. Appreciate the link between the trial lens prescription, the prescription ordered and the final compensated powers due to the as worn position.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

# Advanced Theory in Ophthalmic Dispensing

## Unit 5 - continued

### G. Facial anatomy and frame fitting

The expected learning outcome is that the student should understand the link between anatomical structures and spectacle frame fitting, and be able to:

- G1. Describe the structure of skin in the nasal and aural areas and its relevance to spectacle fitting.
- G2. Describe the facial sensory nerve supply and its relevance to spectacle fitting.
- G3. Recall types of skin allergy and other conditions, which relate to spectacle fitting.
- G4. Appreciate what can happen to the skin due to ill-fitting spectacles.
- G5. Understand the effect and relevance of facial and cranial anatomy on spectacle dispensing for adults.
- G6. Describe facial prostheses as they relate to spectacle fitting.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

#### ASSESSMENT FORMAT

Unit	5		
Title	Advanced Theory in Ophthalmic Dispensing		
Format	Theory examination (online)		
Time allowed	1½ hours	Theory pass mark	40%
Year	2		

### A. Prismatic effect

The expected learning outcome is that the student should understand the significance of prismatic effects at any point on a lens, compare prismatic effects in two eyes, and should be able to:

- A1. Find either graphically or by calculation the magnitude and direction of the prismatic effect at any point on a lens. Either the decentration or the distance of the point from the optical centre of the lens may be given. The prismatic effect may be required as a single resultant value or as vertical and horizontal components.
- A2. Find either graphically or by calculation the magnitude and direction of decentration required to produce a specified amount of prism for a given prescription. The decentration may be required as a single resultant value or as vertical and horizontal components.
- A3. Demonstrate a practical application of estimating vertical power of an astigmatic lens with an oblique cylinder axis in order to calculate prismatic effect at the near vision point (NVP).
- A4. Calculate the amount of prism to be slabbed-off and discuss the thickness difference in bi-centric lenses.
- A5. Determine the prismatic effect at the near visual point on a bifocal lens.
- A6. Calculate and explain the significance of differential prism in bifocal lenses.
- A7. Explain how differential prism at the near visual point can be controlled.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

### B. Cylindrical lenses

The expected learning outcome is that the student should recognise the significance of cylindrical powers on lens thickness, and the need to combine cylindrical powers, and be able to:

- B1. Calculate notional cylindrical powers.
- B2. Calculate the thickness of an astigmatic lens along oblique meridians.
- B3. Sum obliquely combined cylinders either by formulae or by graphical means.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

# Advanced Theory of Ophthalmic Lenses

## Unit 6 - *continued*

### C. Effectivity, vertex powers and accurate transposition

### Related Learning Outcome

The expected learning outcome is that the student should understand effective powers and vergences, be able to solve problems relating to thick spectacle lenses, and be able to:

- C1. Calculate the effective power of a lens.
- C2. Calculate prescription modifications to account for differing vertex distances.
- C3. Transpose lens forms taking thickness into account.
- C4. Explain front and back surface compensation.
- C5. Calculate vertex power allowances.
- C6. Explain near vision effectivity error.
- C7. Describe ophthalmic trial lens types and the suitability of trial lenses for refraction and neutralisation.
- C8. Explain how vertex powers and the vergence impressed by spectacle lenses in near vision in multifocal lenses can be measured using a focimeter.
- C9. Calculate spectacle magnification using the shape factor and power factor.
- C10. Calculate the form and thickness of isekonic lenses.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### D. Aberrations and spectacle lens design

The expected learning outcome is that the student should understand that the quality of images is variable and dependent on design factors, and be able to:

- D1. Expand the sine function and recall what is meant by first order approximation.
- D2. Describe spherical aberration and its influence on the paraxial theory of ophthalmic lenses.
- D3. Describe and calculate transverse chromatic aberration for single vision lenses.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

## Unit 6 - continued

- D4. Describe tangential and sagittal planes of refraction, the astigmatic pencil, teacup and saucer diagrams, image shell diagrams and the variation in oblique astigmatism with stop position and form of lens.
- D5. Describe curvature of field and the Petzval surface and calculate the radius of curvature of the Petzval surface.
- D6. Describe pincushion and barrel distortion and the significance of distortion adaptation to new spectacles.
- D7. Explain the criterion for a best form spectacle lens.
- D8. Describe image shell diagrams for plus and minus point-focal lenses, Percival lenses and lenses which exhibit minimum tangential error.
- D9. Explain the significance of oblique vertex sphere powers and image vergences.
- D10. Explain oblique astigmatic error, mean oblique power and mean oblique error.
- D11. Describe conicoidal surfaces (ellipsoids, paraboloids and hyperboloids).
- D12. Describe the surface astigmatism of a conicoid and how this can be used to combat aberrational astigmatism.
- D13. Calculate the thickness of a lens with a conicoidal surface.
- D14. Describe polynomial surfaces and blended zonal aspheric surfaces.
- D15. Discuss the significance of wavefront aberrations and transfer function.
- D16. Describe freeform technology and the digital surfacing application to lens design

## Related Learning Outcome

### OUTCOME 3: CLINICAL PRACTICE

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

## ASSESSMENT FORMAT

Unit	6		
Title	Advanced Theory in Ophthalmic Lenses		
Format	Theory examination (online)		
Time allowed	1 ½ hours	Theory pass mark	40%
Year	2		

# Standards of Practice

## Unit 7

### A. Acts and bodies

The expected learning outcome is that the student must have an understanding and working knowledge of the relevant legislation and civil laws, as well as codes of conduct and professional guidance to be able to care for, respect and protect the rights, dignity, privacy and confidentiality of patients. Students will be expected to:

- A1. Understand the role of professional, regulatory and corporate bodies that operate in the UK, including committees on a local level.
- A2. Demonstrate an awareness of the contents of the Opticians Act and the following Statutory Instruments:
  - Fitness to practice rules.
  - Rules relating to injury or disease of the eye.
  - Sight testing (examination and prescription) no. 2 regulations.
  - Sale of optical appliances order of Council.
  - Continuing education and training rules.
- A3. Recall the ABDO Advice and Guidelines, the General Optical Council's (GOC) Standards of Practice and other codes and guidance set by the profession.
- A4. Recall sections of the Medicines Act that are relevant to dispensing opticians.
- A5. Understand and explain the terms duty of care and negligence.
- A6. Explain the importance of legal and ethical responsibilities in relation to the publication, advertising and broadcasting information of services, facilities, and goods. Recall and interpret relevant aspects of the Sale of Goods Act, the Trades Description Act and Contract Law.
- A7. Recall and interpret relevant aspects of the Equalities Act.
- A8. Explain the significance of Health and Safety legislation in the workplace, and how it applies to practice owners, employees and patients. Recall the Association's advice regarding infection control and waste disposal. Recall and explain the regulatory implications of the Environment Agency.
- A9. Recall current legislation regarding professional and practice indemnity insurance.

### Related Learning Outcome

#### **OUTCOME 1: PERSON CENTRED CARE**

**O1.2** *Manages desired health outcomes of patients, taking into consideration any relevant medical, family and social history of the patient, which may include personal beliefs or cultural factors.*

**O1.3** *Protects patients' rights; respects the choices they make and their right to dignity and privacy.*

**O1.4** *Ensures high quality care is delivered and puts into place adaptive measures as needed for different environments (such as domiciliary, prisons and special schools).*

**O1.5** *Commits to care that is not compromised because of own personal conscious and unconscious values and beliefs.*

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.1** *Undertakes safe and appropriate ocular examinations using appropriate techniques and procedures to inform clinical decision-making within individual scope of practice.*

#### **OUTCOME 4: ETHICS AND STANDARDS**

**O4.1** *Upholds the values and demonstrate the behaviours expected of a GOC registrant, as described in the GOC Standards of Practice for Optometrists and Dispensing Opticians.*

**O4.6** *Understands the professional and legal responsibilities of trainee and student supervision and of being supervised.*

**O4.8** *Complies with health and safety legislation.*

**O4.9** *Complies with equality and human rights legislation, demonstrates inclusion and respects diversity.*

**O4.10** *Understands the patient or carer's right to complain without prejudicing the standard of care provided.*

**O4.12** *Complies with legal, professional and ethical requirements for the management of information in all forms including the accuracy and appropriateness of patient records and respecting patient confidentiality*

**O4.13** *Manages situations under which patient confidentiality may be breached in order to protect a patient or the public, in line with relevant guidance on disclosing confidential information and/or with the patient's consent.*

**O4.15** *Maintains professional boundaries with patients and others, taking into consideration the additional needs of vulnerable people and specific requests/requirements.*

#### **OUTCOME 5: RISK**

**O5.2** *Knows how to manage complaints, incidents or errors in an effective manner.*



## Unit 7 - continued

- A10. Explain how to keep clear, accurate and contemporaneous patient records, which record all relevant findings and decisions made. Recall the Association's guidance regarding record keeping. Recall and interpret the Data Protection Act and understand the role of the Information Commissioner's office. Interpret and respond appropriately to patient records and other relevant information.

### Related Learning Outcome

**LISTED ON PAGE 31**

## B. General Ophthalmic Services (GOS)

The expected learning outcome is that the candidate should be able to:

- B1. Understand and demonstrate a working knowledge of health care delivery systems. Recall the regulations and describe the formal documentation relating to the provision of General Ophthalmic Services in the UK.
- B2. Describe and demonstrate a systematic understanding of the various policies that a practice is required to have on display or on file including but not limited to:
- Clinical governance
  - Critical incident reporting
  - Freedom of Information Act
  - Safeguarding children
  - Chaperone policy
  - Complaints
  - Data management
  - Gifts reporting
  - Whistle blowing

### **OUTCOME 1: PERSON CENTRED CARE**

**O1.4** Ensures high quality care is delivered and puts into place adaptative measures as needed for different environments (such as domiciliary, prisons and special schools).

**O1.6** Obtains and verifies continuation of valid consent from adults, children, young and vulnerable people and their carers and records as appropriate.

### **OUTCOME 4: ETHICS AND STANDARDS**

**O4.12** Complies with legal, professional and ethical requirements for the management of information in all forms including the accuracy and appropriateness of patient records and respecting patient confidentiality.

**O4.16** Understands the role of carers and the power of attorney.

### **OUTCOME 5: RISK**

**O5.5** Applies infection prevention control measures commensurate with the risks identified.

## C. Business management

The expected learning outcome is that the candidate should be able to:

- C1. Demonstrate how to work within a multidisciplinary team. Understand and appreciate the varying roles such as reception staff, students, clinical and optical assistants, optometrists, dispensing opticians, contact lens opticians, dispensing opticians with a higher qualification in low vision, colleagues with higher qualifications (glaucoma, independent prescribing etc.) general practitioners and ophthalmologists.
- C2. Describe the various UK business models that exist in optometry and ophthalmic dispensing.

### **OUTCOME 2: COMMUNICATION**

**O2.3** Communicates effectively within a multi-disciplinary healthcare team and works collaboratively for the benefit of the patient.

### **OUTCOME 4: ETHICS AND STANDARDS**

**O4.12** Complies with legal, professional and ethical requirements for the management of information in all forms including the accuracy and appropriateness of patient records and respecting patient confidentiality.

**O4.17** Complies with legislation and rules concerning the sale and supply of optical appliances.

**O4.18** Provides clarity on services available and any associated payments.

# Standards of Practice

## Unit 7 - continued

- C3. Devise clear, accurate and contemporaneous records of financial transactions relating to fees and vouchers and other financial information.
- C4. Understand the various and accepted methods of calculating VAT on the sale of spectacles and contact lenses.
- C5. Describe basic business management and financial accounting techniques. Provide information about payment of fees and other costs relevant to patient's needs and wants.
- C6. Demonstrate a knowledge and understanding of professional guidance in relation to conflicts of interest.
- C7. State the implications of current UK and European legislation relevant to the operation of an optical practice and the dispensing of optical appliances. Recall and explain the regulatory implications of the Medical and Healthcare products Regulatory Agency

## Related Learning Outcome

**LISTED ON PAGE 32**

## D. Safeguarding and Consent

The expected learning outcome is that the candidate should be able to:

- D1. Obtains and verifies continuation of valid consent from adults, children, young and vulnerable people and their carers and records as appropriate.
- D2. Applies national law and takes appropriate actions to gain consent and if consent cannot be obtained or is withdrawn.
- D3. Manages situations under which patient confidentiality may be breached in order to protect a patient or the public, in line with relevant guidance on disclosing confidential information and/or with the patient's consent.
- D4. Understands and implements relevant safeguarding procedures, local and national guidance in relation to children, persons with disabilities, and other vulnerable people.
- D5. Demonstrates a systematic understanding of the legislation for the safeguarding of children and vulnerable adults.
- D6. Addresses any health and safety concerns about the working environment that may put themselves, patients or others at risk.

### **OUTCOME 1: PERSON CENTRED CARE**

**01.6** Obtains and verifies continuation of valid consent from adults, children, young and vulnerable people and their carers and records as appropriate.

### **OUTCOME 2: COMMUNICATION**

**02.2** Acts upon non-verbal cues from patients or carers that could indicate discomfort, a lack of understanding or an inability to give informed consent.

### **OUTCOME 4: ETHICS AND STANDARDS**

**04.3** Understands and implements relevant safeguarding procedures, local and national guidance in relation to children, persons with disabilities, and other vulnerable people.

**04.4** Applies the relevant national law and takes appropriate actions i) to gain consent and ii) if consent cannot be obtained or is withdrawn.

**04.13** Manages situations under which patient confidentiality may be breached in order to protect a patient or the public, in line with relevant guidance on disclosing confidential information and/or with the patient's consent.

**04.15** Maintains professional boundaries with patients and others, taking into consideration the additional needs of vulnerable people and specific requests/requirements.

### **OUTCOME 5: LEADERSHIP & MANAGEMENT**

**06.3** Engages with clinical governance requirements to safeguard and improve the quality of patient care, including through contributing to service evaluation and development initiatives.

**06.4** Recognises and manages adverse situations, understanding when to seek support and advice to uphold patients' and others' safety.

# Standards of Practice



## Unit 7 - *continued*

ASSESSMENT FORMAT			
Unit	7		
Title	Standards of Practice		
Format	A combination of a theory examination (online), practice visit and unit 12 practical assessment (FQE)		
Time allowed	1 hour	Theory pass mark	40%
Year	2 / 3	Practical pass mark	60% per section

# Ocular Anatomy and Pathology

## Unit 8

### A. Anatomical terminology

The expected learning outcome is that the student should be able to recall:

- A1. The terms used to identify anatomical planes.
- A2. The terms used to locate a structure's position relative to another structure.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### B. Systems

The expected learning outcome is that the student should be aware of how systems relate to anatomical structures, and be able to describe:

- B1. The structure, functions and location of epithelial tissue, connective tissue, muscle tissue and nervous tissue.
- B2. The structure and functions of blood vessels.
- B3. The terms somatic, autonomic, motor, sensory, central and peripheral, as they apply to the nervous system.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

### C. The eye and ocular adnexa

The expected learning outcome is that the student should be able to describe the location, function, gross structure and dimensions, layers, nerve supply, sources of nutrition, waste product removal, and be able to annotate, as appropriate, a section through:

- C1. The cornea, and to explain factors affecting transparency.
- C2. The sclera, and to recall factors affecting its appearance.
- C3. The limbal region, trabecular meshwork and canal of Schlemm.
- C4. The iris.
- C5. The ciliary body and to describe its involvement in accommodation.
- C6. The choroid.
- C7. The retina.
- C8. The optic nerve.

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

## Unit 8 - continued

- C9. The crystalline lens.
- C10. The conjunctiva.
- C11. The eyelids.
- C12. The lacrimal system.
- C13. The skull and orbit.
- C14. The extrinsic oculorotatory muscles.
- C15. The aqueous and vitreous humours.
- C16. The visual pathway.

### Related Learning Outcome

*This section provides grounding knowledge for Learning Outcomes covered later in the syllabus*

## D. Ocular conditions and systemic disorders

The expected learning outcome is that the student should, for a range of common ocular diseases and disorders:

- D1. Recognise the signs, symptoms and aetiology of patients presenting with common abnormal ocular conditions and describe likely management options for the condition.
- D2. Explain the expected management of a patient presenting with a red eye, painful eye, sudden loss of vision, gradual loss of vision or double vision.
- D3. Understand clinical treatments available.
- D4. Be aware of surgical procedures.
- D5. Explain the importance and significance of family history, signs and symptoms.
- D6. Explain the importance of the patient's health status, medication, work, sports, lifestyle and special skills to ophthalmic dispensing.
- D7. Be aware that certain systemic disorders and medication could have effects on the visual system.

### **OUTCOME 1: PERSON CENTRED CARE**

**01.2** Manages desired health outcomes of patients, taking into consideration any relevant medical, family and social history of the patient, which may include personal beliefs or cultural factors.

**01.7** Demonstrates effective clinical decision-making, diagnosis, evaluation and makes appropriate and timely referral, where this is needed to meet a patient's needs.

### **OUTCOME 3: CLINICAL PRACTICE**

**03.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry.

**03.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

**03.5a (iv)** Accurately identifies patients' conditions and their potential need for medical referral in a timely way, including when urgent or emergency attention is required.

### **OUTCOME 5: LEADERSHIP & MANAGEMENT**

**06.5** Takes appropriate action in an emergency, providing care and clinical leadership within personal scope of practice and referring or signposting patients as needed, to ensure their safe and timely care.

**06.6** Engages with population and public health initiatives and understands how population data should inform practice and service delivery.

# Ocular Anatomy and Pathology

## Unit 8 - continued

### E. Pharmacology

The expected learning outcome is that the student should be able to recognise the use of common ophthalmic drugs, to safely facilitate optometric examination and the diagnosis/ treatment of ocular disease:

- E1. Types of ophthalmic drugs and topical preparations.
- E2. Vitamin and mineral supplements, with awareness of potential physiological impact.
- E3. Modes of action.
- E4. Dosage.
- E5. Functions and effects.
- E6. Regulations affecting the use, storage and disposal of ophthalmic drugs used in ophthalmic practice.
- E7. Detect adverse ocular reactions to medication and advise, manage, and refer in line with patients' individual needs.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (v)** Recognises the use of common ophthalmic drugs, to safely facilitate optometric examination and the diagnosis/treatment of ocular disease.

#### **OUTCOME 4: ETHICS AND STANDARDS**

**O4.11** Adheres to the ethical principles for prescribing and to legislation relating to medicines management.

### ASSESSMENT FORMAT

Unit	8		
Title	Ocular Anatomy and Pathology		
Format	A combination of a theory examination (online), portfolio case records, practice visit and unit 14 practical assessment (FQE)		
Time allowed	2 hours	Theory pass mark	40%
Year	2 / 3	Practical pass mark	60% per section

### A. Practice environment

The expected learning outcome is that the student should be able to:

- A1. Understands the patient pathway and how elements may need to be adapted for paediatric patients
- A2. Consider patient height within the practice environment.
- A3. Use appropriate material to provide a child friendly environment.
- A4. Use appropriate supporting material to aid understanding.

### Related Learning Outcome

#### **OUTCOME 1: PERSON CENTRED CARE**

**01.4** Ensures high quality care is delivered and puts into place adaptative measures as needed for different environments (such as domiciliary, prisons and special schools).

#### **OUTCOME 3: CLINICAL PRACTICE**

**03.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

#### **OUTCOME 5: LEADERSHIP & MANAGEMENT**

**06.3** Engages with clinical governance requirements to safeguard and improve the quality of patient care, including through contributing to service evaluation and development initiatives.

### B. Paediatric prescribing

The expected learning outcome is that the student should be able to:

- B1. Understand the different distance and near test methods designed for children.
- B2. Describe the function and effect of cycloplegic drugs.
- B3. Appreciate the critical period, paediatric prescribing decisions and how the child may be managed e.g. occlusion.
- B4. Understand the mechanisms of childhood-onset myopia and how this may be managed.

#### **OUTCOME 3: CLINICAL PRACTICE**

**03.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry

### C. Developmental anatomy

The expected learning outcome is that the student will be able to:

- C1. Take accurate facial measurements and appreciate how these relate to the final fitting appliance.
- C2. Appreciate the implications of anatomical features and their development over time, in relation to the fitting of the appliances.

#### **OUTCOME 3: CLINICAL PRACTICE**

**03.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

# Paediatric Dispensing

## Unit 9 - *continued*

### D. Frame design

The expected learning outcome is that the student should be able to:

- D1. Understand the importance of frame function in relation to comfort, fit, position, safety, prescription and developmental aspects of the patient:
- Frame material
  - Eye size
  - Eye shape
  - Bridge fit
  - Side type
  - Additional features
- D2. Consider and explain comfort and suitability of frame choice above cosmesis.
- D3. Consider pantoscopic angle in relation to bridge development of the patient.
- D4. Appreciate how to modify a standard frame to ensure a comfortable fit such as:
- Shorten sides
  - Alter nose pad size/material
  - Use of strap bridges
- D5. Explain the importance of maintaining an accurate fit.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

### E. Lenses

The expected learning outcome is that the student will be able to:

- E1. Provide appropriate advice for lens choice such as taking into consideration patient age, hobbies and prescription such as:
- Material
  - Index
  - Safety
  - Lens form
  - Lens coatings
  - Specialist tints
  - Glazing options
  - Surfaced lenses

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*



### F. Paediatric special optical appliances

The expected learning outcome is that the student will be able to:

- F1. Understand the need for UV protection at a young age and the impact of UV of the underdeveloped eye.
- F2. Recognise a requirement for sports appliances such as:
  - Prescription swimming goggles
  - Recreational sports spectacles
- F3. Understand when contact lenses may be a suitable option to discuss with the patient and carer.
- F4. Understand conditions that may require specialist forms of protection such as albinism.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### G. Further anatomical considerations

The expected learning outcome is that the student will be able to:

- G1. Appreciate the facial features of babies under the age of 12 months and the provision of suitable optical appliances.
- G2. Consider the difference in facial characteristics of children and the factors influencing the selection of appropriate optical appliances such as:
  - Children from different ethnicities
  - Children with Down's syndrome
  - Children with other anatomical conditions

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### ASSESSMENT FORMAT

Unit	9		
Title	Paediatric Dispensing		
Format	A combination of portfolio case records, practice visit and unit 14 practical assessment (FQE)		
Time allowed	N/A	Practical pass mark	60% per section
Year	3		

# Practitioner Development

## Unit 10

### A. Research Skills

The expected learning outcome is that the candidate should be able to:

- A1. Use a range of research sources to influence their practice.
- A2. Demonstrate information literacy.
- A3. Evaluate quality of evidence.
- A4. Synthesise research evidence to inform clinical management of patients.
- A5. Effectively communicate pertinent research evidence to justify clinical decisions.
- A6. Critically appraise epidemiological research particularly with regards to eye health.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.2** Engages with developments in research, including the critical appraisal of relevant and up-to-date evidence to inform clinical decision-making and improve quality of care.

**O3.3** Engages with technological advances in eye health and broader healthcare delivery and the significance of specific developments for enhancing patient outcomes and service delivery.

#### **OUTCOME 6: LEADERSHIP & MANAGEMENT**

**O6.6** Engages with population and public health initiatives and understands how population data should inform practice and service delivery.

### B. Leadership

The expected learning outcome is that the candidate should be able to:

- B1. Recognise when services/teams are under pressure and act in a responsible and considered way to ensure safe practice.
- B2. Recognise stress in self and others.
- B3. Demonstrate ability to work with team members to manage the needs of various stakeholders, whilst keeping patient care at the forefront.
- B4. Respect the duties of other members of the practice team and understand how working together provides the best possible care for the patient.
- B5. Be familiar with local and national shared care initiatives, as well as the roles that practice employees play in these initiatives.
- B6. Interact with colleagues and patients in a manner which is compassionate, empathetic, supportive, fair and respectful.
- B7. Act within the Clinical leadership competency framework.
- B8. Recognise where an individual may require protection and know how to take action using appropriate local measures to secure the individual's safety.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry

#### **OUTCOME 4: ETHICS AND STANDARDS**

**O4.1** Upholds the values and demonstrate the behaviours expected of a GOC registrant, as described in the GOC Standards of Practice for Optometrists and Dispensing Opticians.

**O4.2** Acts openly and honestly and in accordance with the GOC Duty of Candour guidelines.

**O4.3** Understands and implements relevant safeguarding procedures, local and national guidance in relation to children, persons with disabilities, and other vulnerable people.

**O4.4** Applies the relevant national law and takes appropriate actions i) to gain consent and ii) if consent cannot be obtained or is withdrawn.

**O4.5** Recognises and works within the limits of own knowledge and skills. Seeks support and refers to others where appropriate.

**O4.14** Recognises and works within the limits of own knowledge and skills. Seeks support and refers to others where appropriate.

#### **OUTCOME 5: RISK**

**O5.1** Recognises when their own performance or the performance of others is putting people at risk and takes prompt and appropriate action.

**O5.3** Address any health and safety concerns about the working environment that may put themselves, patients or others at risk.

## Unit 10 - *continued*

- B9. Be aware of the appropriate referral pathways aligned to scope of practice.
- B10. Manage patients with signs and/or symptoms of a health emergency.
- B11. Show awareness of current CCG activity and public health eye care initiatives within the UK.
- B12. Critically reflect on current service delivery models impact on public health problems, which relate to eye care.
- B13. Utilise knowledge above to inform their practice.

### Related Learning Outcome

#### **OUTCOME 5: RISK**

**05.4** Applies due process for raising and escalating concerns, including speaking-up and protected disclosure if all other routes have been pursued and there is reason to believe that patients or the public are at risk.

#### **OUTCOME 6: LEADERSHIP & MANAGEMENT**

**06.1** Undertakes efficient, safe and effective patient and caseload management.

**06.2** Works collaboratively within healthcare teams, exercising skills and behaviours of clinical leadership and effective team-working and management in line with their role and scope of practice.

**06.5** Takes appropriate action in an emergency, providing care and clinical leadership within personal scope of practice and referring or signposting patients as needed, to ensure their safe and timely care.

**06.6** Engages with population and public health initiatives and understands how population data should inform practice and service delivery.

## C. Lifelong Learning

The expected learning outcome is that the candidate should be able to:

- C1. Undertake further training, develop existing skills and acquire new competences that will enable safe practice in the future in line with new techniques and technologies.
- C2. Identify and address own major learning needs using regular reflection of own practice.
- C3. Demonstrate understanding of GOC CPD requirements for registrants.
- C4. Demonstrate reflective practitioner status.
- C5. Act as a role model, educator, supervisor and mentor, seeking to share best practice, knowledge and skills with other members of the team.
- C6. Demonstrate skills of active listening, empathy, and patient centred care.
- C7. Take on board patient feedback and act in a professional manner to optimise patient care.
- C8. Demonstrate the ability to adopt a growth mind-set in the face of challenges in order to enhance quality of care.

#### **OUTCOME 3: CLINICAL PRACTICE**

**03.2** Engages with developments in research, including the critical appraisal of relevant and up-to-date evidence to inform clinical decision-making and improve quality of care.

#### **OUTCOME 4: ETHICS AND STANDARDS**

**04.2** Acts openly and honestly and in accordance with the GOC Duty of Candour guidelines.

**04.5** Recognises and works within the limits of own knowledge and skills. Seeks support and refers to others where appropriate.

**04.14** Applies health policies and guidance and utilises resources efficiently to improve patient outcomes.

#### **OUTCOME 5: RISK**

**05.1** Recognises when their own performance or the performance of others is putting people at risk and takes prompt and appropriate action.

**05.4** Applies due process for raising and escalating concerns, including speaking-up and protected disclosure if all other routes have been pursued and there is reason to believe that patients or the public are at risk.

#### **OUTCOME 7: LIFELONG LEARNING**

**07.1** Evaluates, identifies, and meets own learning and development needs.

**07.2** Supports the learning and development of others, including through acting as a role model and mentor.

**07.3** Gathers, evaluates and applies effective patient and service delivery feedback to improve their practice.

CONTINUED OVER

# Practitioner Development

## Unit 10 - *continued*

- C9. Demonstrate the ability to critically reflect - learning from previous shortcomings and utilise best practice literature to inform future practice.
- C10. Have a skill set specific to using data for improvement of health care processes and systems.
- C11. Create a yearly personal development plan - identifying and incorporating relevant CPD to fill knowledge gaps and build on areas of interest.

## Related Learning Outcome

### **OUTCOME 7: LIFELONG LEARNING**

**07.4** Engages in critical reflection on their own development, with a focus on learning from experience, using data from a range of information sources (such as clinical audits, patient feedback, peer review and significant event analysis) and identifying and addressing their new learning needs to improve the quality and outcomes of patient care.

## D. Reflective Practice

The expected learning outcome is that the candidate should be able to:

- D1. Identify situations where they cannot perform / complete desired technique and demonstrate appropriate action.
- D2. Demonstrate appropriate action in situations when unable to interpret results.
- D3. Show evidence of appropriate referral to other professionals in a variety of situations.
- D4. Show evidence of consulting other professionals in making decisions.
- D5. Identify gaps in own knowledge and make an appropriate management plan to address this.

### **OUTCOME 3: CLINICAL PRACTICE**

**03.2** Engages with developments in research, including the critical appraisal of relevant and up-to-date evidence to inform clinical decision-making and improve quality of care.

### **OUTCOME 4: ETHICS AND STANDARDS**

**04.2** Acts openly and honestly and in accordance with the GOC Duty of Candour guidelines.

**04.5** Recognises and works within the limits of own knowledge and skills. Seeks support and refers to others where appropriate.

**04.14** Applies health policies and guidance and utilises resources efficiently to improve patient outcomes.

### **OUTCOME 5: RISK**

**05.1** Recognises when their own performance or the performance of others is putting people at risk and takes prompt and appropriate action.

**05.4** Applies due process for raising and escalating concerns, including speaking-up and protected disclosure if all other routes have been pursued and there is reason to believe that patients or the public are at risk.

### **OUTCOME 7: LIFELONG LEARNING**

**07.4** Engages in critical reflection on their own development, with a focus on learning from experience, using data from a range of information sources (such as clinical audits, patient feedback, peer review and significant event analysis) and identifying and addressing their new learning needs to improve the quality and outcomes of patient care.

### E. Supervision, mentoring and delegating activities

The expected learning outcome is that the candidate should be able to:

- E1. Understand GOC Standards of Practice relating to supervision.
- E2. Understand guidance produced by other professional bodies (e.g. ABDO).
- E3. Identify when direct supervision might be appropriate.
- E4. Understand how to ensure the level of supervision is appropriate for the colleague and the task and the level of experience.
- E5. Delegate appropriate activities to unregistered colleagues, applying relevant legislation, standards and guidance.
- E6. Monitor knowledge and skills of unregistered colleagues, including adequate training and assessment for regulated activities.
- E7. Demonstrate appropriate supervision of unregistered colleagues.

### Related Learning Outcome

#### OUTCOME 4: ETHICS AND STANDARDS

**O4.3** Understands and implements relevant safeguarding procedures, local and national guidance in relation to children, persons with disabilities, and other vulnerable people.

**O4.6** Understands the professional and legal responsibilities of trainee and student supervision and of being supervised.

**O4.7** Demonstrates the fulfilment of professional and legal responsibilities in supervising unregistered colleagues undertaking delegated activities.

**O4.11** Adheres to the ethical principles for prescribing and to legislation relating to medicines management.

### F. Maintaining own health

The expected learning outcome is that the candidate should be able to:

- F1. Recognise the importance of wellbeing and how to seek help when the need arises, drawing from the relevant professional resources.
- F2. Recognise signs and symptoms of conditions that could affect their own ability to practice safely, including alcohol dependence, drug abuse, mental health issues and other medical conditions.
- F3. Recognise signs and symptoms of these conditions and explain how to act and when to inform the GOC.

#### OUTCOME 4: ETHICS AND STANDARDS

**O4.8** Complies with health and safety legislation.

#### OUTCOME 5: RISK

**O5.6** Understands the importance of maintaining their own health to remain healthy and professionally effective.

### ASSESSMENT FORMAT

Unit	10		
Title	Practitioner Development		
Format	A combination of portfolio case records, literature review, evidence of CPD experience and evidence of delivering training and practice visit assessment		
Time allowed	N/A	Year	2 / 3

# The Assessment and Management of Refractive Errors

## Unit 11

NOTE: This unit provides trainees with the practical ability to refract, ensuring a deeper understanding of the resultant prescription and the prevention/management of potential issues. Once qualified, DO's may only undertake refraction within their scope of practice.

## Related Learning Outcome

### A. Optics of the eye, ametropia, and its correction

The expected learning outcome is that the student should be able to:

- A1. Describe Gullstrand's simplified schematic eye.
- A2. Describe Emsley's standard and non-standard reduced emmetropic eyes.
- A3. Explain emmetropia and ametropia in real eyes, the simplified schematic eye and the reduced eye.
- A4. Classify spherical ametropia.
- A5. Describe the growth of the human eye in emmetropia, spherical ametropia and progressive myopia.
- A6. Describe the correction of spherical ametropia in the reduced eye with a thin lens.
- A7. Define ocular refraction, spectacle refraction and vertex distance and use equations relating to them.
- A8. Describe, and use equations relating to, the formation of clear and blurred retinal images in reduced eyes.
- A9. Describe, and use equations relating to, the formation of retinal images in the reduced eye, corrected by a thin or thick lens.
- A10. Explain spectacle magnification relating to the reduced eye.
- A11. Calculate the size of retinal images in corrected and uncorrected eyes formed by a near object.
- A12. Describe, and use equations relating to, spectacle and ocular accommodation with the reduced eye.
- A13. Compare the correction of spherical ametropia with contact lenses and spectacle lenses

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry  
**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

# The Assessment and Management of Refractive Errors



## Unit 11 - *continued*

- A14. Define relative spectacle magnification and describe the effect of axial length and corneal power induced ametropia on the retinal image size.
- A15. Describe the classification and correction of astigmatism in the reduced, and human eye.
- A16. Explain irregular refraction.
- A17. Be aware of refractive surgical procedures.

## Related Learning Outcome

**LISTED ON PAGE 45**

## B. Accommodation

The expected learning outcome is that the student should be able to:

- B1. Recall theories of accommodation and how the lens changes during accommodation.
- B2. Describe the stimulus to accommodation.
- B3. Explain the anomalous myopias.
- B4. Describe and explain methods of assessing amplitude range and near point of accommodation.
- B5. Describe presbyopia, its causes and the near addition.
- B6. Explain the effect of depth of field on near vision.
- B7. Explain facultative, absolute, manifest and latent hypermetropia.
- B8. Explain the link between accommodation and early onset myopia.
- B9. Describe clinical aspects of aphakia and pseudophakia and their correction.
- B10. Describe how to control accommodation in paediatric patients.

### **OUTCOME 3: CLINICAL PRACTICE**

**O3.4** *Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following:* • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry  
**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

# The Assessment and Management of Refractive Errors

## Unit 11 - continued

### C. Ophthalmic instruments

The expected learning outcome is that the student should be able to describe and explain the use of:

- C1. The duochrome test.
- C2. The fan and block and associated subjective routine.
- C3. The cross cylinder and associated subjective routine.
- C4. Distance and near test types, including those specifically designed for paediatric use.
- C5. The retinoscope.
- C6. Subjective and objective optometers.
- C7. Direct and indirect ophthalmoscopes.
- C8. Contact and non-contact tonometers.
- C9. Instruments for analysing visual fields and be able to explain the terms used to describe defective visual fields.
- C10. Colour vision tests, and to be able to classify and describe colour vision defects.
- C11. The slit lamp.
- C12. The keratometer and corneal topographers.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.1** Undertakes safe and appropriate ocular examinations using appropriate techniques and procedures to inform clinical decision-making within individual scope of practice.

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry

**O3.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing and managing individuals' functional and developmental visual conditions, including those related to age.

### D. Binocular vision

The expected learning outcome is that the student should understand the significance of co-ordinated eye movements, and be able to:

- D1. Explain primary gaze, the diagnostic positions of gaze, the actions of individual muscles and the mechanism of oculorotation.
- D2. Explain terms used to describe eye movements.
- D3. Describe the relationship between accommodation and convergence.
- D4. Calculate convergence through centred and decentred spectacle lenses.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry

**O3.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing and managing individuals' functional and developmental visual conditions, including those related to age.



# The Assessment and Management of Refractive Errors



## Unit 11 - continued

- D5. Describe fusional reserves.
- D6. Explain physiological diplopia.
- D7. Recall grades of binocular vision.
- D8. Define orthophoria.
- D9. Define and classify heterophoria and heterotropia.
- D10. Describe anomalies of accommodation and convergence.
- D11. Describe tests to investigate binocular vision status.

### Related Learning Outcome

**LISTED ON PAGE 47**

## E. Vision and vision perception

The expected learning outcome is that the student should be able to:

- E1. Explain the duplicity theory of vision and dark adaptation.
- E2. Explain the appearance and causes of entoptic phenomena.
- E3. Define visual acuity.
- E4. Describe methods of measuring and recording visual acuity.
- E5. Explain the effect of pupil size on visual acuity and depth of field.
- E6. Define and classify amblyopia.
- E7. Explain the theories of colour vision.
- E8. Assess monocular and binocular depth perception and stereoacuity.
- E9. Demonstrate methods of assessing stereoacuity and be aware of factors that can affect it.

### OUTCOME 3: CLINICAL PRACTICE

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry

**O3.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing and managing individuals' functional and developmental visual conditions, including those related to age.

## F. Clinical Decision Making

The expected learning outcome is that the student should work within their own scope of practice to be able to:

- F1. Accepts responsibility and accountability for professional decisions and actions as a first point of contact, including responding to individual patients' needs, managing risk, and making appropriate referrals.

**LISTED ON PAGE 49**

# The Assessment and Management of Refractive Errors

## Unit 11 - continued

- F2. Use knowledge of the subject and techniques in a routine manner to evaluate and formulate management plans and solutions to problems encountered in practice.
- F3. Apply underlying concepts and principles outside the context in which they were first studied.
- F4. Apply strategies of clinical decision-making skills within ophthalmic dispensing practice.
- F5. Apply the principles of clinical reasoning and evidence-based practice and the steps in problem solving.
- F6. Effectively triage patients presenting with ocular conditions.
- F7. Use appropriate technologies in diagnosis, treatment, and management of ocular conditions.
- F8. Use appropriate technology in consultation, referral, and clinical data exchange.
- F9. Keep abreast of emerging technologies and their potential application in clinical practice.
- F10. Apply normative data in the interpretation of results of visual function tests.
- F11. Use clinical data to formulate a management plan across a range of ocular conditions.
- F12. Analyse clinical data in light of presenting signs and symptoms.
- F13. Demonstrate effective management across the specified range of patients.

### ASSESSMENT FORMAT

Unit	11	
Title	The Assessment and Management of Refractive Errors	
Format	A combination of a theory examination (online), portfolio case records and Unit 14 practical assessment (FQE)	
Time allowed	2 hours	Theory pass mark 40%
Year	3	Practical pass mark 60% per section

## Related Learning Outcome

### OUTCOME 1: PERSON CENTRED CARE

**O1.2** Manages desired health outcomes of patients, taking into consideration any relevant medical, family and social history of the patient, which may include personal beliefs or cultural factors.

**O1.4** Ensures high quality care is delivered and puts into place adaptative measures as needed for different environments (such as domiciliary, prisons and special schools).

**O1.7** Demonstrates effective clinical decision-making, diagnosis, evaluation and makes appropriate and timely referral, where this is needed to meet a patient's needs.

**O1.8** Refers and signposts as necessary to sight loss and other relevant health services.

### OUTCOME 3: CLINICAL PRACTICE

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry.

**O3.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing and managing individuals' functional and developmental visual conditions, including those related to age.

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

**O3.5a (iv)** Accurately identifies patients' conditions and their potential need for medical referral in a timely way, including when urgent or emergency attention is required.

### OUTCOME 4: ETHICS AND STANDARDS

**O4.12** Complies with legal, professional and ethical requirements for the management of information in all forms including the accuracy and appropriateness of patient records and respecting patient confidentiality.

**O4.14** Applies eye health policies and guidance and utilises resources efficiently to improve patient outcomes.

**O4.15** Maintains professional boundaries with patients and others, taking into consideration the additional needs of vulnerable people and specific requests/requirements.

### OUTCOME 5: RISK

**O5.7** Able to risk assess i) patient's clinical condition and ii) a situation in clinical practice and make appropriate clinical decisions.

### OUTCOME 5: LEADERSHIP & MANAGEMENT

**O6.5** Takes appropriate action in an emergency, providing care and clinical leadership within personal scope of practice and referring or signposting patients as needed, to ensure their safe and timely care.

# The Assessment and Management of Visual Impairment



## Unit 12

### A. Visual impairment in practice

The expected learning outcome is that the student should appreciate the visual needs, expectations, and requirements of visually impaired patients, and be able to:

- A1. Define visual impairment in terms of visual acuity and visual field.
- A2. Consider the criteria for sight impaired / severely sight impaired certification, the appropriate forms.
- A3. Explain the difference between registration and certification and the benefits registration can offer the patient.
- A4. Consider and verify the effectiveness of current refraction.

### Related Learning Outcome

#### **OUTCOME 1: PERSON CENTRED CARE**

**O1.4** Ensures high quality care is delivered and puts into place adaptative measures as needed for different environments (such as domiciliary, prisons and special schools).

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.1** Undertakes safe and appropriate ocular examinations using appropriate techniques and procedures to inform clinical decision-making within individual scope of practice.

### B. General assessment of Visual Impairment:

The expected learning outcome is that the student should conduct an assessment of visual impairment, including through full history-taking and evaluation of visual requirements, identifying and advising patients who could benefit from simple or complex low-vision aids.

- B1. Complete an assessment of visual impairment, including through full history-taking and evaluation of visual requirements.
- B2. Describe the aetiology, epidemiology, and pathogenesis of the leading causes of sight loss, including those affecting paediatric patients and people of working age.
- B3. Explain the risk factors, likely progression and complications, and treatment and monitoring options for the pathologies stated in B2.
- B4. Understand the criteria for referral for a new prescription and understand limitation of knowledge.
- B5. Compare types of test charts used for distance and near vision and discuss their uses, construction principles, advantages, and disadvantages.
- B6. Understand the assessment of visual fields and visual pathway, including location of lesions giving rise to visual impairment.
- B7. Be aware of how systemic pathology may affect vision, visual acuity and visual fields.

#### **OUTCOME 1: PERSON CENTRED CARE**

**O1.4** Ensures high quality care is delivered and puts into place adaptative measures as needed for different environments (such as domiciliary, prisons and special schools).

**O1.7** Demonstrates effective clinical decision-making, diagnosis, evaluation and makes appropriate and timely referral, where this is needed to meet a patient's needs.

**O1.8** Refers and signposts as necessary to sight loss and other relevant health services.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.1** Undertakes safe and appropriate ocular examinations using appropriate techniques and procedures to inform clinical decision-making within individual scope of practice.

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following: • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry

**O3.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing and managing individuals' functional and developmental visual conditions, including those related to age.

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

**O3.5a (iv)** Accurately identifies patients' conditions and their potential need for medical referral in a timely way, including when urgent or emergency attention is required.

# The Assessment and Management of Visual Impairment

## Unit 12 - *continued*

- B8. Understand the reasons for reduced near vision acuity.
- B9. Understand the terms related to monocular and binocular contrast sensitivity.
- B10. Describe the factors affecting contrast sensitivity and the clinical tests used to assess it.
- B11. Understand the indications for binocular and monocular appliances, including use of occlusion.

### Related Learning Outcome

**LISTED ON PAGE 50**

### C. Magnification in visual impairment:

The expected learning outcome is that the student should be able to:

- C1. Understand the method of paraxial ray tracing through a thick lens or system of lenses, including telescopic systems and calculate magnifying power in afocal and non-afocal settings.
- C2. Construct ray diagrams to show image formation through magnifying devices.
- C3. Define and calculate linear, nominal, maximum and angular magnification for a simple magnifier or lens system.
- C4. Estimate magnification required (with use of Snellen acuities) for distance, and near vision and any other relevant distances.
- C5. Describe the aberrations that may affect magnifying devices and how may these be controlled.
- C6. Explain convergence and accommodation requirements when using magnifying aids.
- C7. Explain the use of specialist viewing techniques.
- C8. Explain 'equivalent viewing power' and 'equivalent viewing distance', and quantify the magnification produced by varying systems.
- C9. Calculate the required high reading addition to achieve a required acuity.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

# The Assessment and Management of Visual Impairment



## Unit 12 - *continued*

### D. Availability and dispensing of appliances for visual impairment:

The expected learning outcome is that the student evaluates the clinical findings of assessments of visual impairment, applying knowledge of low-vision optics to dispense appropriate simple and complex low-vision aids and provide relevant advice:

- D1. Select and dispense suitable optical aids for different visual tasks.
- D2. Be aware of British and International standards for low vision aids.
- D3. Consider the design, availability, and suitability of non-optical aids.
- D4. Consider the design, availability and suitability of electronic aids including the use of mobile applications.
- D5. Consider the use of contact lenses for patients with visual impairment.
- D6. Understand the effects of contrast filters and other methods of improving contrast.
- D7. Consider the effects of illumination, glare and low contrast sensitivity on vision and visual acuity.
- D8. Consider types of lamps and positioning of light sources and the relevance of discomfort and disability glare.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.4** *Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following:* • Dispensing of optical appliances • Low vision/visual impairment • Refractive management • Anterior eye and contact lenses • Ocular and systemic disease • Binocular vision • Paediatrics • Patients with learning disabilities and complex needs • Occupational optometry

**O3.5a (i)** *Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing and managing individuals' functional and developmental visual conditions, including those related to age.*

**O3.5a (ii)** *Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.*

*Unit 12 continues over the page*

# The Assessment and Management of Visual Impairment

## Unit 12 - continued

### E. Rehabilitation:

The expected learning outcome is that the student advises on accessing and makes appropriate referrals to services for visual impairment, in line with patients' best interests:

- E1. Demonstrate training in the use of optical aids.
- E2. Consider the psychology of low vision, recognising/describing the impact of sight loss and the stages of support required.
- E3. Understand the aftercare management of visually impaired patients, including the frequency of aftercare visits required.
- E4. Manage a patient's care in a safe, ethical, and confidential environment.
- E5. Discuss the role of other healthcare professionals and support groups in the field of visual impairment.
- E6. Demonstrate the ability to refer and the advantages of working within a multi-disciplinary team.

### Related Learning Outcome

#### **OUTCOME 1: PERSON CENTRED CARE**

**O1.7** Demonstrates effective clinical decision-making, diagnosis, evaluation and makes appropriate and timely referral, where this is needed to meet a patient's needs.

**O1.8** Refers and signposts as necessary to sight loss and other relevant health services.

#### **OUTCOME 2: COMMUNICATION**

**O2.3** Communicates effectively within a multi-disciplinary healthcare team and works collaboratively for the benefit of the patient.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### ASSESSMENT FORMAT

Unit	12	
Title	The Assessment and Management of Visual Impairment	
Format	A combination of a theory examination (online), portfolio case records and Unit 14 practical assessment (FQE)	
Time allowed	2 hours	Theory pass mark 40%
Year	3	Practical pass mark 60% per section

# The Principles of Contact Lens Wear



## Unit 13

### A. Contact lens types

The expected learning outcome is that the student should be able to:

- A1. Describe the differences between the various types of contact lenses available
- A2. Compare the advantages and disadvantages of the different types of contact lenses available
- A3. Discuss the advantages and disadvantages of different contact lens materials.

### Related Learning Outcome

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (iii)** Advises on the safe and effective use of contact lenses and removal in an emergency.

### B Selection and fit of contact lenses:

The expected learning outcome is that the student should be able to:

- B1. Explain the choice of contact lens parameters, fitting philosophies and design for the various types on contact lenses available.
- B2. Describe the procedures involved in an initial assessment of a prospective contact lens wearer.
- B3. Compare the advantages and disadvantages of contact lens wear with spectacle wear.
- B4. Review the therapeutic uses of contact lenses and their use in patients with low vision.
- B5. Summarise the use of contact lenses in myopia management.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (iii)** Advises on the safe and effective use of contact lenses and removal in an emergency.

*Unit 13 continues over the page*

# The Principles of Contact Lens Wear

## Unit 13 - *continued*

### C. Contact lens advice and aftercare:

The expected learning outcome is that the student should be able to:

- C1. Discuss the different handling techniques for all types of contact lenses and demonstrate the ability to remove a contact lens in an emergency.
- C2. Review the requirement for wearing schedules.
- C3. Discuss the purposes and types of contact lens care regimes and understand the common constituents of the solutions used.
- C4. Describe the purpose and content of aftercare visits.
- C5. Discuss contact lens aftercare issues and their management.
- C6. Describe the signs, symptoms, and management of serious contact lens complications.
- C7. Discuss the legal and ethical matters relating to contact lens practice.

### Related Learning Outcome

#### **OUTCOME 1: PERSON CENTRED CARE**

**O1.7** Demonstrates effective clinical decision-making, diagnosis, evaluation and makes appropriate and timely referral, where this is needed to meet a patient's needs.

#### **OUTCOME 3: CLINICAL PRACTICE**

**O3.5a (iii)** Advises on the safe and effective use of contact lenses and removal in an emergency.  
**O3.5a (iv)** Accurately identifies patients' conditions and their potential need for medical referral in a timely way, including when urgent or emergency attention is required.

### ASSESSMENT FORMAT

Unit	13	
Title	The Principles of Contact Lens Wear	
Format	A combination of a theory examination (online) and portfolio case record	
Time allowed	1 hour	Theory pass mark 40%
Year	3	



### A. Assessment of Refractive Error

#### 1 hour

The expected learning outcome is that the candidate should be able to demonstrate and appropriately record the following in relation to the assessment of a presbyopic patient:

- A1. Obtain accurate history and symptoms to include ocular, medical and lifestyle factors, from the patient and/or any other appropriate person involved in their care.
- A2. Demonstrate recording unaided visions, cover test, motility, and pupil reaction.
- A3. Perform a gross field check and external visual examination of the eye and surrounding structure.
- A4. Subjectively refine prescription results.
- A5. Determine the binocular vision status.
- A6. Measure and record the amplitude of accommodation and determine the reading addition and near visual acuity.
- A7. Interpret the results of history-taking and the examination of the refractive and ocular motor status to inform clinical decision-making and care management plans.
- A8. Advise the patient on appropriate further tests including a full internal examination of the eye.

### Related Learning Outcome

#### **OUTCOME 3. CLINICAL PRACTICE**

**O3.1** Undertakes safe and appropriate ocular examinations using appropriate techniques and procedures to inform clinical decision-making, within individual scope of practice.

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following:

- Dispensing of optical appliances
- Low vision/visual impairment
- Refractive management

- Anterior eye and contact lenses
- Ocular and systemic disease
- Binocular vision

- Paediatrics

- Patients with learning disabilities and complex needs
- Occupational optometry

**O3.5** Meets the following clinical practice outcomes for registration as a dispensing optician.

**O3.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing, and managing individuals' functional and developmental visual conditions, including those related to age.

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

#### **OUTCOME 4. ETHICS & STANDARDS**

**O4.15** Maintains professional boundaries with patients and others, taking into consideration the additional needs of vulnerable people and specific requests/requirements.

Unit 14 continues over the page

# Advanced Ophthalmic Dispensing Practice

## Unit 14 – Final Qualifying Examination (FQE) - *continued*

### B. Spectacle dispensing

**1 hour**

The expected learning outcome is that the candidate should be able to:

- B1. Measure and record details for a handmade, regular bridge frame.
- B2. Explain the significance of back vertex distance (VD).
- B3. Explain how changing frame measurements may affect the overall fitting.
- B4. Dispense and fit the most appropriate frame to the paediatric head supplied.
- B5. Explain the development expected as the child grows and how this affects facial measurements and frame fitting.
- B6. Measure and record details for a frame with pads on arms.

### Related Learning Outcome

#### **OUTCOME 3. CLINICAL PRACTICE**

**O3.5a** (ii) Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### C. Problem solving and prescription analysis

**1 hour**

The expected learning outcome is that the candidate should be able to:

- C1. Manage a case of progressive lens non-tolerance.
- C2. Check the necessary measurements to ensure the order has been made relative to British and European standards relating to frame and lens measurements.
- C3. Explain the significance of the previous pair.
- C4. Detail the outcome for the patient.
- C5. Perform simple mathematical functions such as toric transposition, prismatic effect and decentration calculations.
- C6. Demonstrate how to communicate effectively when dealing with patient complaints.
- C7. Explain how to deal with patient's fears, anxieties, and concerns about their visual welfare.

#### **OUTCOME 3. CLINICAL PRACTICE**

**O3.5a** (ii) Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

#### **OUTCOME 4. ETHICS & STANDARDS**

**O4.13** Manages situations under which patient confidentiality may be breached in order to protect a patient or the public, in line with relevant guidance on disclosing confidential information and/or with the patient's consent.

## Unit 14 – Final Qualifying Examination (FQE) - *continued*

- C8. Describe how to recognise the patient's expectations and aspirations and how to manage the situations where these cannot be met.
- C9. Demonstrate how to describe lenses in terms of material, type, form, edge finish and additional features
- C10. Explain how to measure the PD of a patient with strabismus.

Prescriptions for discussion may include the following topics for single vision, bifocal, trifocal and progressive power lenses, as appropriate:

- Paediatric (including pre-school) dispensing.
- Complex prescriptions.
- Occupational dispensing.
- Sports eyewear dispensing.
- Gross anisometropia.
- Prescribed tints.
- Prescribed prisms.
- Personal eye protection.
- Low Vision – to include referral procedure.
- Legalities of contact lens supply.
- Complex lens description.
- Patient history.
- Prescription details.
- Discussion on lens types suitable for the prescription.
- Fitting and adjustment details.
- Advice and/or instructions given to patient.

- C11. Complete a professional discussion based on the portfolio submission and associated categories.

## Related Learning Outcome

### **OUTCOME 3. CLINICAL PRACTICE**

**O3.1** Undertakes safe and appropriate ocular examinations using appropriate techniques and procedures to inform clinical decision-making, within individual scope of practice.

**O3.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following:

- Dispensing of optical appliances
- Low vision/visual impairment
- Refractive management
- Anterior eye and contact lenses
- Ocular and systemic disease
- Binocular vision
- Paediatrics
- Patients with learning disabilities and complex needs
- Occupational optometry

**O3.5** Meets the following clinical practice outcomes for registration as a dispensing optician.

**O3.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing, and managing individuals' functional and developmental visual conditions, including those related to age.

**O3.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

### **OUTCOME 4. ETHICS & STANDARDS**

**O4.15** Maintains professional boundaries with patients and others, taking into consideration the additional needs of vulnerable people and specific requests/requirements.

*Unit 14 continues over the page*

# Advanced Ophthalmic Dispensing Practice

## Unit 14 – Final Qualifying Examination (FQE) - *continued*

### D. Ocular abnormalities and Special Optical Appliances (SOA)

**1 hour**

The expected learning outcome is that the candidate should be able to:

- D1. Recognise ocular pathological conditions.
- D2. Explain what action a GOC registered dispensing optician should take when presented with an ocular pathological condition.
- D3. Explain when and to whom any referral should be made.
- D4. Recognise where emergency action may be needed.
- D5. Record all relevant information relating to a referral.
- D6. Recall the legal obligations of a GOC registered dispensing optician in caring for patients.
- D7. Discuss the suitability of low vision appliances for given scenarios.
- D8. Discuss a variety of suitable SOAs for a given scenario.
- D9. Give advice for the patient on the use of special optical or low vision appliances.

### Related Learning Outcome

#### **OUTCOME 1. PERSON CENTERED CARE**

**01.7** Demonstrates effective clinical decision making, diagnosis, evaluation and makes appropriate and timely referral, where this is needed to meet a patient's needs

#### **OUTCOME 3. CLINICAL PRACTICE**

**03.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

**03.5a (iv)** Accurately identifies patients' conditions and their potential need for medical referral in a timely way, including when urgent or emergency attention is required

#### **OUTCOME 6. LEADERSHIP & MANAGEMENT**

**06.5** Takes appropriate action in an emergency, providing care and clinical leadership within personal scope of practice and referring or signposting patients as needed, to ensure their safe and timely care

### ASSESSMENT FORMAT

Unit	14	
Title	Advanced Ophthalmic Dispensing Practice	
Format	Practical Assessment Day	
Time allowed	5 hours	Practical pass mark 60% per section
Year	3	

### A. Assessment of portfolio

The expected learning outcome is that the candidate should be able to:

- A1. Demonstrate their ability to produce clear and legible case records.
- A2. Demonstrate their ability to produce full and accurate case records.
- A3. Produce the correct number of each type of prescription and scenario, as laid down in the PQP guidelines.
- A4. Demonstrate an ability to justify their dispensing choices.

Category	No.
Paediatric dispensing & Myopia Management.....	6
Powers +/-5.00 to +/-9.75D.....	4
Powers over +/-9.75.....	4
Bifocals.....	2
Trifocals & PPL's.....	6
Occupational dispensing .....	2
Alteration of reading addition for a specific task.....	2
Problem solving.....	4
Sports eyewear dispensing.....	2
Personal eye protection.....	2
Prescription for gross anisometropia.....	2
Prescribed prism .....	2
Prescribed Tint.....	2
Low vision.....	6
Involvement in referral for pathological reasons.....	2
Contact lenses.....	1
FMO manufacturing report.....	1

### B. Practice Visit Assessment

The expected learning outcome is that the candidate should be able to:

- B1. Evidence the compulsory list of equipment.
- B2. Evidence 10 prepared case records of patient encounters and provide the appropriate audit trail.
- B3. Demonstrate proficiency in all learning outcomes listed within the practice visit guide.
- B4. Demonstrate the ability to manipulate and repair spectacle frames.

**NOTE:** The training and experience gained in Section A Assessment of Portfolio and B Practice Visit Assessment, are deemed appropriate preparation for the Final Qualifying Examinations. Therefore, both must be passed to be eligible to apply for the Final Qualifying Examinations.

### Related Learning Outcome

#### OUTCOME 1. PERSON CENTERED CARE

**01.2** Manages desired health outcomes of patients, taking into consideration any relevant medical, family and social history of the patient, which may include personal beliefs or cultural factors

**01.4** Ensures high quality care is delivered. Puts into place adaptive measures as needed for different environments (such as domiciliary, prisons and special schools)

**01.7** Demonstrates effective clinical decision making, diagnosis, evaluation and makes appropriate and timely referral, where this is needed to meet a patient's needs

**01.8** Refers and signposts as necessary to sight loss and other relevant health services.

#### OUTCOME 2. COMMUNICATION

**02.3** Communicates effectively within a multi-disciplinary healthcare team and works collaboratively for the benefit of the patient

**02.4** Critically reflects on how they communicate with a range of people and uses this reflection to improve their interactions with others

#### OUTCOME 3. CLINICAL PRACTICE

**03.1** Undertakes safe and appropriate ocular examinations using appropriate techniques and procedures to inform clinical decision-making, within individual scope of practice

**03.2** Engages with developments in research, including the critical appraisal of relevant and up-to-date evidence to inform clinical decision-making and improve quality of care

**03.3** Engages with technological advances in eye health and broader healthcare delivery and the significance of specific developments for enhancing patient outcomes and service delivery

**03.4** Analyses visual function from a range of diagnostic sources and uses data to devise a clinical management plan for a patient in areas that include the following:

- Dispensing of optical appliances
- Low vision/visual impairment
- Refractive management
- Anterior eye and contact lenses
- Ocular and systemic disease
- Binocular vision
- Paediatrics
- Patients with learning disabilities and complex needs
- Occupational optometry

**03.5** Meets the following clinical practice outcomes for registration as a dispensing optician

**03.5a (i)** Acts as a first point of contact for patients for their eye health needs by investigating, diagnosing, and managing individuals' functional and developmental visual conditions, including those related to age.

**03.5a (ii)** Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

# Portfolio and Practice Visit

## Unit 15 - Learning outcomes - continued

### Related Learning Outcome

#### **OUTCOME 3. CLINICAL PRACTICE - CONTINUED**

**O3.5a** (iii) Advises on the safe and effective use of contact lenses and removal in an emergency

**O3.5a** (iv) Accurately identifies patients' conditions and their potential need for medical referral in a timely way, including when urgent or emergency attention is required

**O3.5a** (v) Recognises the use of common ophthalmic drugs, to safely facilitate optometric examination and the diagnosis / treatment of ocular disease

#### **OUTCOME 4. ETHICS & STANDARDS**

**O4.4** Applies the relevant national law and takes appropriate actions i) to gain consent and ii) if consent cannot be obtained or is withdrawn

**O4.5** Recognises and works within the limits of own knowledge and skills. Seeks support and refers to others where appropriate

**O4.7** Demonstrates the fulfilment of professional and legal responsibilities in supervising unregistered colleagues undertaking delegated activities

**O4.12** Complies with legal, professional and ethical requirements for the management of information in all forms including the accuracy and appropriateness of patient records and respecting patient confidentiality

**O4.14** Applies health policies and guidance and utilises resources efficiently to improve patient outcomes

**O4.17** Complies with legislation and rules concerning the sale and supply of optical appliances

#### **OUTCOME 5. RISK**

**O5.1** Recognises when their own performance or the performance of others is putting people at risk and takes prompt and appropriate action

#### **OUTCOME 6. LEADERSHIP & MANAGEMENT**

**O6.5** Takes appropriate action in an emergency, providing care and clinical leadership within personal scope of practice and referring or signposting patients as needed, to ensure their safe and timely care

#### **OUTCOME 7. LIFELONG LEARNING**

**O7.1** Evaluates, identifies, and meets own learning and development needs

**O7.2** Supports the learning and development of others, including through acting as a role model or mentor

**O7.4** Engages in critical reflection on their own development, with a focus on learning from experience, using data from a range of information sources (such as clinical audits, patient feedback, peer review and significant event analysis) and identifying and addressing their new learning needs to improve the quality and outcomes of patient care

#### **OUTCOME 1. PERSON CENTERED CARE**

**O1.1** Actively listens to patients and their carers to ensure patients are involved in and are at the heart of decisions made about patients' care.

**O1.2** Manages desired health outcomes of patients, taking into consideration any relevant medical, family and social history of the patient, which may include personal beliefs or cultural factors

**O1.3** Protects patients' rights; respects the choices they make and their right to dignity and privacy

**O1.4** Ensures high quality care is delivered. Puts into place adaptive measures as needed for different environments (such as domiciliary, prisons and special schools)

**O1.5** Ensures that care is not compromised because of own personal conscious and unconscious values and beliefs

**O1.6** Obtains and verifies continuation of valid consent from adults, children, young and vulnerable people and their carers and records as appropriate

#### **OUTCOME 2. COMMUNICATION**

**O2.1** Conducts communications in a sensitive and supportive manner adapting their communication approach and style to meet the needs of patients, carers health and care colleagues and the public

**O2.3** Communicates effectively within a multi-disciplinary healthcare team and works collaboratively for the benefit of the patient

#### **OUTCOME 3. CLINICAL PRACTICE**

**O3.5a** (ii) Completes an informed clinical assessment of individual patients' needs and uses this to dispense, fit and advise on the safe and effective use of spectacles, low-vision aids and other ophthalmic appliances.

#### **OUTCOME 4. ETHICS & STANDARDS**

**O4.1** Upholds the values and demonstrate the behaviours expected of a GOC registrant, as described in the GOC Standards of Practice, for Optometrists and Dispensing Opticians

**O4.2** Acts openly and honestly and in accordance with the GOC Duty of Candor guidelines

**O4.3** Understands and implements relevant safeguarding procedures, local and national guidance in relation to children, persons with disabilities, and other vulnerable people

**O4.4** Applies the relevant national law and takes appropriate actions i) to gain consent and ii) if consent cannot be obtained or is withdrawn

**O4.7** Demonstrates the fulfilment of professional and legal responsibilities in supervising unregistered colleagues undertaking delegated activities

**O4.8** Complies with health and safety legislation

**O4.9** Complies with equality and human rights' legislation, demonstrates inclusion and respects diversity

**O4.11** Adheres to the ethical principles for prescribing and legislation relating to medicines management

**O4.12** Complies with legal, professional and ethical requirements for the management of information in all forms including the accuracy and appropriateness of patient records and respecting patient confidentiality

**O4.14** Applies health policies and guidance and utilises resources efficiently to improve patient outcomes

**O4.15** Maintains professional boundaries with patients and others, taking into consideration the additional needs of vulnerable people and specific requests/requirements

**O4.18** Provides clarity on services available and any associated payments

#### **OUTCOME 5. RISK**

**O5.1** Recognises when their own performance or the performance of others is putting people at risk and takes prompt and appropriate action

**O5.5** Applies infection prevention control measures commensurate with the risks identified

**O5.7** Able to risk assess i) patient's clinical condition and ii) a situation in clinical practice and make appropriate clinical decisions

#### **OUTCOME 6. LEADERSHIP & MANAGEMENT**

**O6.2** Works collaboratively within healthcare teams, exercising skills and behaviours of clinical leadership and effective team-working and management in line with their role and scope of practice

#### **OUTCOME 7. LIFELONG LEARNING**

**O7.3** Gathers, evaluates and applies effective patient and service delivery feedback to improve their practice

## *Preliminary Qualifying Examination Year 1*

### Ophthalmic Dispensing Practice

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#### Section A - Single vision lenses

##### **1 hour total**

**Pass mark 50%**

Candidates will be required to complete the following tasks and record:

- A1 Use a lens measure to find the base curve, cross curve and sphere curve on two uncut lenses.

**15 minutes**

- A2 Use a focimeter to find the powers of a pair of glazed toric single vision lenses, locate the vertical position of the optical centres and the optical centre distance.

**15 minutes**

- A3 Hand neutralise a pair of spectacles glazed with toric lenses, locate the vertical position of the optical centres and the optical centre distance.

**30 minutes**

#### Section B - Frame measurements and materials

##### **1 hour total**

**Pass mark 50%**

Candidates will be required to measure and record:

- B1 A range of measurements for a fixed pad bridge frame, regular bridge frame and a frame with pads on arms.

**30 minutes**

- B2 Identify and describe types of frame construction, materials and properties.

**30 minutes**

#### Section C - Spectacle fitting and facial measurements

##### **1 hour total**

**Pass mark 50%**

Candidates will be required to demonstrate their ability to:

- C1 Adjust a plastics material frame to fit a patient, and discuss tools used.

**10 minutes**

Adjust a metal frame to fit a patient, and discuss tools used.

**10 minutes**

Adjust a rimless mount to fit a patient, and discuss tools used.

**10 minutes**

- C2 Take a full set of facial measurements from a patient.

**30 minutes**

#### Section D - Single vision prescription analysis and lens description

##### **30 minutes total**

**Pass mark 50%**

Candidates will be required to demonstrate, at preliminary level, their ability to discuss and interpret a variety of prescriptions and prescribers' comments as well as a verbal description of presented lenses:

- General type
- Material
- Form
- Edge finish
- Additional features

**30 minutes**



# Practical Examinations

## *Final Qualifying Examination Year 3*

### Advanced Ophthalmic Dispensing Practice

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#### Section A - Refraction

##### **1 hour total**

**Pass mark** 60%

##### **A1 Refraction**

Candidates will be required to complete a full refraction routine of a presbyopic patient who has lost their previous spectacles.

The routine should include the following :

History & symptoms

Unaided vision, cover test, motility test, pupil reactions

Gross field check

External examination of eyes

Measuring subjective correction

Measuring binocular vision status

Measuring amplitude of accommodation and determining reading add

Creating care management plan based on results.

Candidates will not be required to perform an internal fundus examination, and the use of an Auto-refractor is not permitted.

**1 hour**

#### Section B - Spectacle Dispensing

##### **1 hour total**

Candidates will be required to complete the following dispensing tasks:

##### **B1 Dispense a handmade frame**

Measure and record details for a handmade, regular bridge frame fitted with single vision lenses.

**30 minutes**

**Pass mark** 60%

##### **B2 Paediatric dispense**

Select and fit the most appropriate frame. Measure and record the details for a bifocal dispense.

**30 minutes**

**Pass mark** 60%



## Final Qualifying Examination Year 3

### Advanced Ophthalmic Dispensing Practice

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#### Section C - Prescription analysis

**2 hours total**

**Pass mark 60%**

- C1 **Progressive lens non-tolerance**  
Using the patient records, discuss the problems experienced by the patient, verify that the spectacles meet British Standards using a manual focimeter, note the relevance of the previous pair, propose the optical solution/outcome for the patient.

**30 minutes**

**Pass mark 60%**

- C2 Prescription analysis where candidates are required to discuss prescriptions and describe presented lenses. Case record prescriptions may include the following topics for single vision, bifocal, trifocal and progressive power lenses as appropriate:

- Paediatric (including pre-school) dispensing
- Complex prescriptions
- Occupational dispensing
- Sports eyewear dispensing
- Gross anisometropia
- Prescribed tints
- Prescribed prisms
- Personal eye protection
- Low vision
- Patient history
- Prescription details
- Discussion on lens types suitable for the prescription
- Fitting and adjustment details
- Advice and/or instructions given to patient
- Contact lens legalities

**30 minutes**

**Pass mark 60%**

- C3 Following the successful submission of the portfolio case records, candidates will undertake a 1hr professional discussion on-line viva, based on experiences and decisions made within the submitted case records and the topics as listed in C2.

**1 hour**

**Pass mark 60%**

**NOTE:** Section C3 will be conducted on-line at a mutually convenient time between you and your examiner. Section C1 and C2 will be completed at the practical assessment day in Birmingham and will be 1 hour in duration.

#### Section D - Ocular abnormalities and special optical appliances

**1 hour total**

Candidates will be required to complete station exams which may comprise of the following scenarios:

- D1 Identify pathological ocular conditions from photographs or illustrations and patient records and follow the correct referral procedure where required.

**20 minutes**

**Pass mark 60%**

- D2 Using patient history, select the most appropriate low vision appliance and note the benefits and limitations of the appliance and the advice given to the patient.

**20 minutes**

**Pass mark 60%**

- D3 Using the patient scenarios provided, select the most appropriate appliance for the patient, noting benefits and limitations and the advice given.

**20 minutes**

**Pass mark 60%**



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## abdo | Examinations

### **ABDO Examinations and Registration**

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