



European Council of Optometry and Optics

Guidelines for the Accreditation of European  
Optical Qualifications to Meet the Standards of the  
European Qualification in Optics

Part 1

The ECOO Accreditation Scheme

October 2017

# Part I: The Accreditation System

## 1. Introduction

The European Council of Optometry and Optics (ECOO) has a vision of Europe where there is easy access to affordable eye care provided by opticians and optometrists who practise autonomously to conserve and improve human vision.

One of the goals of the European Council of Optometry & Optics (ECOO) is to harmonise and develop educational standards and the scope of practice for optometry and optics. It is envisaged that this Qualification in Optics will have particular relevance to and be adopted by training institutions in countries where there is either a lower, or no, established standard for optics.

The European Diploma in Optometry has been an important tool in influencing the development of optometric education and raising the recognition, the level of competence and the scope of practice of optometry in Europe. There are three parts to the European Diploma in optometry. Part A is Optics and Optical Appliances, Part B is Clinical Investigation and Management and Part C is Biological and Medical Sciences and includes ocular disease and ocular pharmacology.

The World Council of Optometry also has developed a global competency-based model of the scope of practice for optometry to reflect the varying scope of practice across the world and which is based on the Parts of the European Diploma with the addition of level 4. Within this, they have defined four levels as follows;

- Level 1 Optical Technology services
- Level 2 Visual Function services, also encompassing Level 1
- Level 3 Ocular Diagnostic services, also encompassing Levels 1, and 2
- Level 4 Ocular Therapeutic services, also encompassing Levels 1, 2 and 3

The European Diploma in Optometry is set at level 3; the qualification in optics is set at Level 1.

However, given the broad range of education and scope of practice of both optometry and optics in Europe and the difficulty of the majority of members to relate closely with the European Diploma in Optometry there is a strong case for a qualification which would (i) establish a basic entry standard for optics at a European level and (ii) encourage professional bodies and training institutions to develop beyond this entry standard.

This draft competency framework has been developed with reference to Part A of the European Diploma and should serve as part of the 'ladder' of qualification in optics and optometry. It is envisaged that this qualification would allow exemption from Part A of the European Diploma in Optometry. This framework has been designed to be similar to the WCO competency framework at level 1 and has been informed by

existing European ophthalmic dispensing competencies. The intention is that delivery of this competency framework will be assessed by the accreditation of training institutions or by examinations run by other bodies and accredited by ECOO. ECOO does not envisage running any examinations for this qualification. This competency framework should also be an important reference to any syllabus revision or development for national training institutions.

The legal scope of practice within the countries of ECOO varies from assembling spectacles to the autonomous management of eye disease. In the spirit of the Bologna declaration ECOO has established the European Diploma in Optometry and the European Qualification in Optics (EQO) as a stimulus to the harmonisation of European optical and optometric education and clinical practice. The European Diploma (ED) is set at the Bachelor level in European Higher Education and provides a qualification appropriate for Optometric practice at Category 3 of the World Council of Optometry's four categories model. The countries of ECOO have adopted the Diploma as the "Gold Standard" for European Optometry. The EQO is a new qualification set at an entry standard for dispensing optics in Europe and is intended to be the first step on a ladder of qualification which could lead to qualification as an optometrist.

As harmonisation progresses an increasing number of schools and universities now base their curriculum on the ED, similarly it is hoped that the EQO will be used as a minimum standard by institutions teaching opticians. To foster this harmonization ECOO has established an accreditation agency to invite training institutions to benchmark their programmes against the ED and EQO. The intention is to exempt of approved programmes from part or all of the examinations of the European Diploma.

Furthermore, the suggested number of European Credit Transfer and Accumulation point (ECTS) based on the credit point system of European Higher Education and European Credit for Vocational Education and Training point (ECVET) based on the more recently developed credit point system for educational programmes at vocational training institutions are included in this document. Both types of credit points express the volume of learning and workload on the defined learning outcome or unit for students. In addition, they are a numerical representation of the overall weight of learning outcomes in a qualification and of the relative weight of units in relation to the qualification. In most countries, 60 credit points reflect the learning outcomes and associated workload of a full-time academic year or its equivalent. Depending on the country, **one credit point** can equal on average between **25 and 30 study hours**. For those learning outcomes that are part of the ED as well as the EQO, both credit point systems are indicted to ascertain equivalency of learning outcomes.

## 2. What will be the benefits of the accreditation process?

- All European Optics programmes can be compared against an agreed international standard, the EQO.
- Training Institutions will be encouraged to match their programmes to all or part of the competency-based EQO - this will help to harmonize optics within Europe.
- It may help training institutions, in the course of their national academic accreditation, if they can demonstrate that all or part of their programme meets the European standard.
- Graduates of accredited EQO institutions can be exempted from Part A examination of the European Diploma in Optometry if they aspire a career in Optometry by attending an accredited European Diploma institution.
- National “competent authorities” will find it easier to evaluate the training of applicants from another EU country – this will help to facilitate free movement of professionals.

## 3. What will actually be accredited?

- Because of the diversity of Optometry/Optics training within Europe the system will be Competency-based. The emphasis will be on the quality of the graduate rather than on details of the training process.
- The EQO is competency-based:  
Competency is the ability to perform the activities within an occupation to the standard expected in employment. Competencies are the skills, attitudes and knowledge needed to be able to practice.

In the context of this document “Competency” refers to the performance of the optometric/optical practitioner: the integration of skills, attitudes and knowledge that informs the practitioner in his/her professional activities. “Competencies” are the individual components of the skills, attitudes and knowledge that must be mastered to achieve “Competency”.

In training programmes the skills, attitudes and knowledge gained on successful completion of a module or course are referred to as the “learning outcomes” of that module or course. The student demonstrates the achievement of these “learning outcomes” by passing the corresponding module assessments (examinations) that are designed to test specifically for the acquisition of these “learning outcomes”.

“Learning outcomes” are typically defined in the format: “On successful completion of the module the student will be able to .....”. Hence “Learning Outcomes” can be conveniently matched against the EQO “Competencies”.

- The accreditation system will consider the skills, attitudes and knowledge achieved by graduates of the programme. The approach will be to benchmark the learning outcomes of the training programme being considered against the competencies of the European Diploma.
- Exemption will be given from any or all of the three Parts of the EQO whose competencies can be shown to have been taught and assessed to the EQO standard within the training programme. It may be possible to give exemption from subsections of each of the three Parts. The subsection is the smallest unit that will be given exemption.

#### 4. The Accreditation questionnaire.

- A questionnaire has been prepared that lists all the Competencies/Learning outcomes of the EQO. (See Part II).
- An Institution applying for accreditation completes the questionnaire as a self-assessment document indicating where these European Qualification outcomes are being taught and assessed within the programme being considered.
- The location of each competency/learning outcome within the programme is defined with respect to the Institution's formal Optometry/Optics **programme specification**.
- The relative importance of each competency/learning outcomes within the programme is given by the associated credit weighting.
- The method of assessment of each competency/learning outcome and its contribution to the final examination mark is indicated by reference to the programme's **examination document** or equivalent.

**The questionnaire is long, but it is simple. It does not ask for details of the teaching process over many years. It asks for evidence of the quality of the graduate - the learning outcomes and the practical competencies achieved by graduates after successful completion of the programme.**

#### 5. Additional documentation in support of the questionnaire.

In addition to completing the questionnaire, please supply the following:

- Programme specification (or equivalent).
- Examination document (or equivalent).
- Student timetable, didactic, practical experience
- Records of students' practical experience.

## 6. Analysis and verification of the Completed Questionnaire.

- The completed questionnaire is considered by ECOO and a provisional opinion is given as to possible exemptions.
- If the training institution wishes to continue with Accreditation a group of 4 ECOO nominated Opticians, Optometrists and Educationalists are invited to visit the Institution to verify the contents of the Questionnaire.
- The procedure to be followed on the Visit by both the Visitors and the Institution is defined in the **Part III** of this document.

## 7. Guidance in Completing the Questionnaire.

- Guidance in the completion of the questionnaire is given in the examples from the questionnaire reproduced below in Tables 1 and 2.  
***The Self-Assessment Questionnaire itself is Part II of this document.***
- In the questionnaire (and Tables 1 and 2 below) the first column lists all of the European Diploma Competencies in the fourteen Subjects that cover the curriculum.
- **Knowledge base of Competencies**  
Some of the fourteen Subjects in the Competency-based European Qualification relate to the knowledge base that supports the competency and practical skills whereas other competencies require theoretical knowledge only
- The requirement is to ***“have an understanding of”*** or ***“a knowledge of”***.
- The achievement of ***“knowledge”*** or ***“understanding”*** (K&U) can be acceptably demonstrated by indicating the formal written examination(s) in which the candidate demonstrated satisfactory understanding and knowledge of all aspects (including health-related aspects) of the specific competency. An example of how this part of the questionnaire could be completed is given in Table 1.
- **Note:** If the Learning Outcomes of a Subject are achieved across several different modules it may be more convenient when completing the questionnaire to subdivide the list of Learning Outcomes amongst the relevant modules.
- **Practical base of Competencies (P)**  
Some of the fourteen Subjects in the Competency-based European Qualification relate to the knowledge base as well as the practical skills (see Table 2)

Table 1. Knowledge base for the EQO competencies

| Subject 1: Geometrical Optics   |   |  |
|---|---|--|
| Learning outcomes: The candidates should demonstrate fundamental knowledge and insight into geometrical optics in order for the candidate to be able to understand and solve problems related to the eye and optical instruments/lenses, their function and correction. Knowledge and understanding should be demonstrated in the areas of: (1) refraction at single spherical or plane surfaces, (2) thin lenses, (3) thick lenses, (4) aberrations, (5) apertures, (6) spherocylindrical lenses, (7) thin prisms, (8) mirrors, and (9) ophthalmic and optical instruments. The aim is to achieve knowledge of the fundamentals of geometrical optics and how they apply to the human eye. |   |  |
| Where in the programme.   | Credit weighting.   | Method of assessment.  |
| Geometrical Optics Course First Year<br>See Programme Specification pXX   | Geometrical Optics First Year Course XX<br>Credits<br>See Programme Specification pXX | Closed book written MCQ Examination.<br>See Examination Document pXX |

Table 2. Practical EQO Competencies

| Subject 5: Optical appliances   |  |   |                             |              |
|---|--|---|-----------------------------|--------------|
| Practical competencies:   | Competency assessment  |   | Practical experience        |              |
|   | How assessed.  | Where in the programme.   | Number of clients examined. | Record kept. |
| 1 The ability to advise on and to dispense the most suitable form of optical correction taking into account durability, comfort, cosmetic appearance and lifestyle. |  |   |                             |              |
| 2 The ability to measure and verify optical appliances, taking into account relevant standards.   | Ophthalmic Dispensing Clinic Assessment See Examination Doc p xx | Ophthalmic Dispensing Third Year See Programme Specification p xx |                             |              |

## **COMPETENCY FRAMEWORK FOR THE QUALIFICATION IN OPTICS**

This competency framework focuses on the outcomes of what an individual trained to an appropriate level should be able to demonstrate to meet the agreed competencies of an optician.

The competency and knowledge framework list comprises four main components aligned with Part A of the European Diploma together with other components to complete the framework. Below please find the level of competency to be covered (knowledge & understanding [K&U]) and/or practical skill [C&P]).

1. Geometrical Optics (K&U)
2. Physical Optics (K&U)
3. Visual Optics (K&U)
4. Optical Appliances (K&U, P)
5. Occupational Optics (K&U, P)
6. Methods of ocular examination (K&U)
7. Refractive error (K&U)
8. Contact Lenses (K&U)
9. Ocular conditions and emergencies (K&U)
10. Business Management (K&U, P)
11. Spectacle Assembly (C & P)
12. Communication (C & P)
13. Professional conduct (C & P)

## 8. Programme details.

Duration of programme Number of years: \_\_\_\_\_

Full-time or part-time: \_\_\_\_\_

Number of students each year: \_\_\_\_\_

Is the programme competency-based? \_\_\_\_\_

Is there a period of supervised practical practice? \_\_\_\_\_

How many weeks does it last? \_\_\_\_\_

Is this organised by the training institution? \_\_\_\_\_

Type of Qualification awarded on completion: \_\_\_\_\_

Employment profile for graduates?

National scope-of-practice: \_\_\_\_\_

Legislation pending to change scope of practice? \_\_\_\_\_

If so what changes? \_\_\_\_\_

# ECOO QUALIFICATION IN OPTICS

## SYLLABUS

### Subject 1 – Geometrical Optics

Suggested ECTS / ECVET: 6

#### Refraction at single spherical or plane surfaces

Curvature and sagittal

Refractive index and rectilinear propagation

Vergence and dioptric power

Object-image relationships, including apparent depth

Ray tracing, nodal point, and nodal ray

Lateral (translinear) and angular magnification

Snell's law of refraction

#### Thin Lenses

Vergence: dioptric and effective power

Object-image relationships

Lateral (translinear) and angular magnification

Thin lens systems

Prismatic effects (Prentice's rule and prism effectivity)

Ray tracing, optical centre and optic axis

#### Thick Lenses

Cardinal points

Vertex power and equivalent power

Lateral (translinear) and angular magnification

Reduced systems

#### Aberrations

Spherical

Gama  
Oblique astigmatism  
Curvature of field  
Distortion  
Chromatic (longitudinal and lateral)  
Higher order aberrations

### **Apertures**

Entrance and exit pupil size and location  
Depth of focus, depth of field, hyperfocal distance  
Field of view and half illumination

### **Sphero-cylindrical lenses**

Location of foci, image planes, principal meridians and circle of least confusion  
Obliquely crossed sphero-cylindrical lenses  
Transposition  
Prismatic effect

### **Thin Prisms**

Unit of measurement (prism dioptre)  
Prism deviation  
Combination of thin prisms  
Resolution of an oblique prism into horizontal and vertical components  
Total internal reflection

### **Mirrors**

Planar and spherical reflection  
Proportion of light reflected from a surface (Fresnel's law)  
Focal power, focal length and curvature  
Object image relationships  
Magnification

Lens/mirror systems

Ray tracing

### **Ophthalmic and optical instruments**

Direct and indirect ophthalmoscopes

Retinoscope

Focimeter

Biomicroscope (slit lamp microscope)

Radiuscope (microspherometer)

Keratometer (ophthalmometer)

Diagnostic lenses (gonioscope, fundus etc)

### **Wavefront technology**

## **Subject 2 – Physical Optics**

Suggested ECTS / ECVET: 4

### **Wave optics**

Characteristics of wave motion

Classification of the electromagnetic spectrum

Total and partial coherence

Diffraction (single slit, circular aperture, limits of resolution, zone plates)

Interference (double slit, multiple slits, thin film, antireflective coatings, holography)

Scattering (Rayleigh compared to Tyndall)

Dispersion

### **Interaction of light and matter**

Atomic energy levels, absorption and emission line spectra

Continuous spectra

Fluorescence (photons, energy levels)

Lasers (theory of operation, speckle pattern)

Spectral transmission

Light emitting diodes (LED)

### **Polarisation**

Linearly polarised light

Circular and elliptical polarisation

Polarisation by reflection (glare reduction, Brewster's law)

Effects of scattering on polarisation

Transmission through successive polarisers (stress analysis, Malus' law)

### **Image Quality**

Resolving power

Point and line spread function

Modulation transfer function (Fourier optics)

## **Subject 3 – Visual Optics**

**Suggested** ECTS / ECVET: 2

### **Schematic eye models**

Dioptric components

Cardinal points, entrance and exit pupils

Ametropia: far point, near point, correction

Accommodation: amplitude and effectivity

Astigmatism including correction

Retinal image size, spectacle magnification and relative spectacle magnification

### **Dioptrics of the eye**

Characteristics of components (curvature, thickness, separation, refractive indices and axial length)

Reference angles and axes

Catoptric (Purkinje) images

Retinal image size

Optical function of the pupil

### **Quality of the retinal image**

Aberrations (spherical, chromatic, coma, curvature, oblique astigmatism, distortion)

Diffraction

Stray light

Point and line spread functions

### **Radiation and the eye**

Radiometry (radiant, intensity, radiance and irradiance)

Photometry (luminosity function, luminous intensity, luminance, illuminance, Lambertian surfaces-cosine laws)

Spectral transmission of the ocular media

Retinal illuminance

Effects of radiation (especially infrared, visible and ultraviolet)

## **Subject 4 Optical Appliances**

Suggested ECTS / ECVET: 12

### **Physical characteristics of ophthalmic lenses**

Geometry of lens surfaces (spherical, cylindrical, toric, aspheric)

Lens form

Lens thickness (centre, edge, gradients)

Specification of lens size and shape

Materials (refractive index, dispersion, hardness, specific gravity)

### **Optical characteristics of ophthalmic lenses**

Locations of and relationships between the optic axis, optical centre, geometric centre and major reference points

Principles of corrected curve lens design

Verification of lens prescriptions (focimeter, lens measure)

Writing and transposing lens prescriptions

Effect of lens tilt (spheres and spherocylinders about a principal meridian)

Effective power (for near and for changes in vertex distances)

## **Ophthalmic prisms and prismatic effect of lenses**

Thickness differences across a prism

Prismatic effects in the periphery of a lens (spheres, spherocylinders)

Decentration (prism from decentration, decentring to obtain prism, interpupillary distance)

Correction of vertical prism effect

Slab off (front, back, top, bottom, reverse)

Double slab off

Dissimilar segments

Compensated R segments

Prism segments

Multiple corrections

Fresnel prisms

Fresnel power additions

## **Multifocal lenses**

Types (fused, one-piece, progressive power additions and blended lenses)

Methods of producing add powers

Segment centre location

Image movement

Total displacement, horizontal and vertical imbalance

Placement of distance and multifocal optical centre

Optical and physical characteristics of segments (design and calculations, progressive adds aberrations, surface characteristics)

Specifying multifocal height, size, shape and location of segment

## **Physical characteristics and biological compatibility of frame materials**

### **Specification and nomenclature of spectacle frame components**

### **Optical and spectacle frame consideration of high-powered lenses: spheric, aspheric and high index materials**

## **Spectacle magnification**

Shape and power factors

Iseikonic lens design

## **Methods of remedying reflections and secondary images**

### **Absorptive lenses**

Specification of lens tints and absorptive coatings (including spectral transmission curves)

Characteristics of photochromic lenses

Relationship between lens thickness and spectral transmission

Special occupational requirements

### **Impact Resistance**

Degrees of resistance of ophthalmic lens materials

Methods of rendering materials impact resistance

Methods of verifying impact resistance

Performance of materials upon impact and after impact

Specification of occupational safety lenses

## **Optical tolerances and physical requirements of ophthalmic lenses and frame materials (EN)**

### **Spectacle Applications**

Spectacle lens prescriptions for ametropia

Lens problems of aberrations, weight, thickness, limits of field, secondary images, magnification, jump and displacement

Frame and lens design, including types of single vision and multifocal lenses, types of lens materials, base curves and cylinder forms, character and placement of multifocals, optical centres and frame specifications.

Evaluation of lenses and frames, via focimeter, lens gauge, observation, for optical centre positioning, powers and other specifications of design.

Fitting and adjusting frames for the wearer

Client counselling information associated with the dispensing of prescriptions for different ametropias.

## **Subject 5 – Occupational Optics**

Suggested ECTS / ECVET: 2

### **Visual Performance**

Visual capability

Visibility of tasks

### **Ocular Injuries**

Mechanical

Non-mechanical

### **Eye Protection**

Lens materials

Testing procedures

Frame material

Regulations

### **Lamps and lighting**

Concepts

Photometric units

Light sources

Luminaires

Lighting Design

Recommendations

Glare and its control

### **Visual display units**

Asthenopia

Facial rash/dermatitis

Epilepsy

Radiation

Regulations

### **Driving**

Visual function and driving performance

Visual demands

Regulations

## **Section 6 – Methods of Ocular Examinations**

Suggested ECVET 3

### **Auto-refraction**

Principles of auto-refraction

Effectiveness and limitations of auto-refraction

Accuracy of use

### **Visual Field Screening**

Principles of visual field screening

Visual field defects and their causes

Benefits and limitations of visual field screening

Accuracy of use

### **Non contact tonometry**

Principles of tonometry

Alternative methods of measuring intra ocular pressure

Advantages and disadvantages of non contact tonometry

The need for intra ocular pressure measurement

Accuracy of use

### **Fundus photography and ocular coherence tomography (OCT)**

Principles of fundus photography and OCT

Advantages and disadvantages of fundus camera and OCT

Accuracy of use

Conditions for which OCT could be beneficial

## **Slit lamp**

Principles of the slit lamp

Uses of the slit lamp

## **Section 7 – Refractive error**

Suggested ECVET 4

### **Anatomical structures of the eye and their function**

#### **Refractive errors**

Myopia

Hyperopia

Astigmatism

Presbyopia

#### **Correction of refractive error**

Spectacle lenses

Contact lenses

Laser surgery

#### **Interpretation of optical prescriptions**

Single vision prescriptions

Bifocal prescriptions

Progressive power prescriptions

## **Section 8 – Contact Lenses**

Suggested ECVET 4

### **Professional and legal implications of the supply of contact lenses and aftercare**

Medical devices directive

Legal requirements/qualifications to fit contact lenses

After care

Supply of contact lenses

## **Contact lens solutions**

Medical devices directive

Different solutions for different types of contact lenses

Supply of solutions

## **Design of contact lenses**

Specifications for the fitting of different types of contact lenses

Contact lens materials and advantages and disadvantages

Comparison of different designs, advantages and disadvantages

Medical use of contact lenses

## **Wearing modalities**

Different wearing modalities their advantages and disadvantages

Replacement schemes for different materials

## **Non-compliance with wearing and care regimes**

Limits of responsibility and authority of non-professional staff

Signs of non-compliance

Consequences of non-compliance

Storage and lens care within the practice

Lens care regimes for different modalities

Insertion and removal of different lens types

## **Section 9 – Ocular conditions and emergencies**

Suggested **ECVET** 4

### **Eye Conditions encountered in an optical practice**

Signs and symptoms of common red eye conditions

Aetiology of common red eye conditions

Management of red eye conditions

Flashes and floaters

Sudden loss of vision

Macula degeneration

Diabetic retinopathy

Strabismus

Amblyopia

### **Dealing with an ocular emergency**

What is an ocular emergency?

Priorities in ocular emergencies

Communication with clients and relatives in ocular emergencies

Referral procedures

Role of non professional staff

## **Section 10 – Business management**

Suggested ECVET 10

### **Legal and regulatory requirements**

Trade descriptions in the optical environment

Employment law

Equal opportunities

Discrimination law

Data protection

Medical devices legislation

### **Regulatory and professional requirements**

Regulations controlling eye care and the supply of spectacles and contact lenses

Practice standards

The role of different eye care professionals

### **Health and Safety**

Health and safety regulations applying to an optical practice

Client safety in the practice

Risk assessment

Fire equipment and regulations

### **Communication in optical practice**

Different communication styles and methods

Advantages and disadvantages of different communication methods

Addressing concerns of customer and family

Understanding limitations of responsibility

Client confidentiality

Record keeping

Recall systems

### **Managing staff and performance development**

Responsibilities of staff management

Staff development

Performance management

Appraisal systems

Disciplinary and grievance systems

### **Customer Service**

Principles of customer service

Customer service in an optical environment

Managing complaints and complaint resolution

Managing customer behaviour in difficult situations

### **Selling in an optical environment**

General rules of selling

Challenges in selling

Sales in an optical practice

### **Factors for success of an optical practice**

Demographics

Location

Range of services

Financial planning

### **Advertising and Promotion**

Understanding and evaluating the effectiveness of different marketing techniques

National and professional advertising regulations

Marketing communications and data protection

The role of promotions

### **Financial management**

Price structures (cost price, mark ups, selling price, VAT, overheads, recovery of costs, profit margin)

Stock control

Different payment systems

Basic accounting

## Part II The Self-Assessment Document

### Knowledge base for the European Qualification in Optics

#### Subject 1: Geometrical Optics

**Learning outcome:** The student should demonstrate fundamental knowledge and insight into geometrical optics in order for the student to be able to understand and solve problems related to the eye and optical instruments/lenses, their function and correction. Knowledge and understanding should be demonstrated in the following areas:

| Learning outcome areas:                     | Where in the programme? | Credit weighting? | Method of assessment? |
|---|-------------------------|-------------------|-----------------------|
| 1.1 refraction at single spherical or plane |                         |                   |                       |
| 1.2 thin lenses                             |                         |                   |                       |
| 1.3 thick lenses                            |                         |                   |                       |
| 1.4 aberrations                             |                         |                   |                       |
| 1.5 apertures                               |                         |                   |                       |
| 1.6 spherocylindrical lenses                |                         |                   |                       |
| 1.7 thin prisms                             |                         |                   |                       |
| 1.8 mirrors                                 |                         |                   |                       |

## Subject 2: Physical Optics

**Learning outcome:** The student should demonstrate fundamental knowledge and insight into physical optics in order for the student to be able to understand and solve problems related to the eye and optical instruments/lenses, their function and correction. Knowledge and understanding should be demonstrated in the following areas:

| Learning outcome areas:                        | Where in the programme? | Credit weighting? | Method of assessment? |
|--|-------------------------|-------------------|-----------------------|
| 2.1 wave optics                                |                         |                   |                       |
| 2.2 interaction of light on matter             |                         |                   |                       |
| 2.3 polarization                               |                         |                   |                       |
| 2.4 transmission through successive polarizers |                         |                   |                       |
| 2.5 image quality                              |                         |                   |                       |

### Subject 3: Visual Optics

**Learning outcome:** The student should demonstrate fundamental knowledge and insight into visual optics in order for the student to be able to understand and solve problems related to image formation, both qualitative and quantitative, for the student to investigate the optics of the human visual system and refractive correction. Knowledge and understanding should be demonstrated in the following areas:

| Learning outcome areas:  | Where in the programme? | Credit weighting? | Method of assessment? |
|--|-------------------------|-------------------|-----------------------|
| 3.1 schematic eye models,  |                         |                   |                       |
| 3.2 dioptrics of the eye,  |                         |                   |                       |
| 3.3 entopic phenomena,   |                         |                   |                       |
| 3.4 quality of retinal image, and  |                         |                   |                       |
| 3.5 Prismatic effect and the manipulation of lens forms and setting to the desired control of prismatic effect |                         |                   |                       |
| 3.6 radiation and the eye.   |                         |                   |                       |
| 3.7 Eye protection regulations and relevant standards  |                         |                   |                       |

## Subject 4: Optical Appliances

**Learning outcome:** The student should demonstrate fundamental knowledge and skills of optical appliances and dispensing and how visual correction interacts with the eye. Knowledge and understanding should be demonstrated in the following areas:

| Learning outcome areas:  | Where in the programme? | Credit weighting? | Method of assessment? |
|--|-------------------------|-------------------|-----------------------|
| 4.1 Physical characteristics of ophthalmic lenses                            |                         |                   |                       |
| 4.2 Optical characteristics of ophthalmic lenses                             |                         |                   |                       |
| 4.3 Ophthalmic prisms and prismatic effect of lenses                         |                         |                   |                       |
| 4.4 Multifocal lenses  |                         |                   |                       |
| 4.5 Physical characteristics and biological compatibility of frame materials |                         |                   |                       |
| 4.6 Specification and nomenclature of spectacle frame components             |                         |                   |                       |
| 4.7 Optical and frame considerations of high power lenses                    |                         |                   |                       |
| 4.8 Spectacle magnification  |                         |                   |                       |

|   |  |  |  |
|---|--|--|--|
| 4.9 Absorptive lenses   |  |  |  |
| 4.10 Impact resistance  |  |  |  |
| 4.11 Optical tolerances and physical requirements of ophthalmic lenses and frame materials (EN) |  |  |  |
| 4.12 Spectacle applications   |  |  |  |

## Subject 5: Occupational Optics

**Learning outcome:** The student should demonstrate knowledge and understanding and be able to discuss and test visual function in relation to occupational optics. Knowledge and understanding should be demonstrated in the following areas:

| Learning outcome areas:                                   | Where in the programme? | Credit weighting? | Method of assessment? |
|---|-------------------------|-------------------|-----------------------|
| 5.1 Visual Performance                                    |                         |                   |                       |
| 5.2 Ocular injuries                                       |                         |                   |                       |
| 5.3 Eye protection and its regulation                     |                         |                   |                       |
| 5.4 Lamps and lighting and regulations regarding lighting |                         |                   |                       |
| 5.5 Visual display units                                  |                         |                   |                       |
| 5.6 Regulations related to vision and                     |                         |                   |                       |

## Subject 6: Methods of Ocular Examination

Learning outcome: the student should gain a technical understanding of instrumentation used in the examination of the eye and related structures. The student should demonstrate:

| Learning outcome:  | Where in the programme? | Credit weighting? | Method of assessment |
|--|-------------------------|-------------------|----------------------|
| 4.1 an understanding of the optical principles of instruments used in the examination of the cornea/anterior eye, the posterior eye/fundus and related structures, the reasons for their use and the implications of such measurements |                         |                   |                      |

## Subject 7: Refractive Error

Learning outcome: the student should demonstrate a basic knowledge of the structure and functions of the eye and a technical understanding of refractive error and its measurement. The student should demonstrate:

| Learning outcome:   | Where in the programme? | Credit weighting? | Method of assessment? |
|---|-------------------------|-------------------|-----------------------|
| 7.1 Anatomical structure of the eye and its functions   |                         |                   |                       |
| 7.2 Refractive errors   |                         |                   |                       |
| 7.3 A basic theoretical knowledge of the measurement of vision and understanding of the effects of refractive error |                         |                   |                       |
| 7.4 an understanding of the refractive prescription   |                         |                   |                       |

## Subject 8: Contact Lenses

Learning outcome: The student should acquire a basic theoretical knowledge of contact lenses and related regimes. The student should demonstrate:

| Learning outcome:  | Where in the programme? | Credit Weighting | Method of assessment? |
|--|-------------------------|------------------|-----------------------|
| 8.1 a theoretical knowledge of contact lens types and materials, their benefits and disadvantages, and their most appropriate applications |                         |                  |                       |
| 8.2 a basic knowledge of client instruction in contact lens handling, and all aspects of lens wear including wearing regimes               |                         |                  |                       |
| 8.3 The professional and legal complications of contact lens fitting   |                         |                  |                       |

## Subject 9: Ocular Conditions and Emergencies

Learning outcome: The student should exhibit an understanding of the relevance and implications of ocular disease. The student should demonstrate:

| Learning outcome:  | Where in the programme? | Credit Weighting | Method of assessment |
|--|-------------------------|------------------|----------------------|
| 9.1 a basic theoretical knowledge of ocular conditions to recognise and appropriately refer ocular emergencies |                         |                  |                      |

## Subject 10: Business Management

Learning outcome: The student should acquire an understanding of business management processes and related to optical business and practice. The student should demonstrate:

| Learning Outcome:  | Where in the programme? | Credit Weighting | Method of assessment |
|--|-------------------------|------------------|----------------------|
| 10.1 an understanding of business management including accounting, marketing and human resources |                         |                  |                      |
| 10.2 an understanding of legislation relevant to business and practice                           |                         |                  |                      |
| 10.3 communication   |                         |                  |                      |

## Practical Competencies

### Subject 4: Optical appliances

Learning outcome: The student should demonstrate the ability to produce a complete pair of spectacles to given specifications. The student should demonstrate Practical competency in the following areas:

| Practical competencies:  | Competency assessment |                         | Practical experience |              |
|--|-----------------------|-------------------------|----------------------|--------------|
|  | How assessed?         | Where in the programme? | Number of Units      | Record kept? |
| 9.1 The ability to advise on and to dispense the most suitable form of optical correction taking into account durability, comfort, cosmetic appearance and lifestyle |                       |                         |                      |              |
| 9.2 The ability to measure and verify optical appliances, taking into account relevant standards.  |                       |                         |                      |              |
| 9.3 The ability to fit, adjust and repair optical appliances   |                       |                         |                      |              |

|   |  |  |  |  |
|---|--|--|--|--|
| 9.3.1 Identifies current and obsolete frame materials and applies their properties when handling, adjusting, repairing and dispensing |  |  |  |  |
| 9.3.2. Demonstrates knowledge of frame and lens manufacturing and the application of special lens treatments                          |  |  |  |  |
| 9.4 The ability to manage non-tolerance cases   |  |  |  |  |
| 9.5 The ability to advise on and dispense appropriate safety, vocational, vocational and special optical appliances                   |  |  |  |  |
| 9.6 The ability to dispense low vision aids   |  |  |  |  |
| 9.7 the ability to dispense an appropriate optical appliance to paediatric clients, taking account of their facial anatomy            |  |  |  |  |

## Subject 11: Spectacle Assembly

Learning outcome: The student should demonstrate the ability to assemble a complete pair of spectacles; including cut, edge and fit, repairs and adjustments. The student should demonstrate Practical competency in the following areas:

| Practical competencies:   | Competency assessment |                         | Practical experience         |              |
|---|-----------------------|-------------------------|------------------------------|--------------|
|   | How assessed?         | Where in the programme? | Number of clients dispensed? | Record kept? |
| 9.1. The ability to cut edge and fit a range of lens types to a range of different styles and materials of spectacle frames and mounts to a given prescription and client |                       |                         |                              |              |
| 9.2 The ability to carry out repairs and adjustments to spectacle frames and mounts to a given specification  |                       |                         |                              |              |

## Subject 12: Communication

Learning outcome: The student should demonstrate the ability to communicate effectively with the client and any other appropriate person involved in the care of the client. The student should demonstrate Practical competency in the following areas:

| Practical competencies:  | Competency assessment |                         | Practical experience  |              |
|--|-----------------------|-------------------------|-----------------------|--------------|
|  | How assessed?         | Where in the programme? | Number and of clients | Record kept? |
| 11.1. The ability to communicate with a diverse group of clients with a range of ophthalmic conditions and needs |                       |                         |                       |              |
| 11.2 The ability to provide information in a way which is appropriate to the client                              |                       |                         |                       |              |

## Subject 13: Professional Conduct

Learning outcome: the student should exhibit their ability to comply with the legal, ethical and professional aspects of business and practice. The student should demonstrate Practical competency in the following areas:

| Practical competencies:  | Competency assessment |                         | Practical experience |              |
|--|-----------------------|-------------------------|----------------------|--------------|
|  | How assessed?         | Where in the programme? |                      | Record kept? |
| 12.1. The ability to look after the clients in a safe, appropriate and confidential environment          |                       |                         |                      |              |
| 12.2 The ability to comply with legal, professional and ethical issues relating to business and practice |                       |                         |                      |              |

## Part III: The Accreditation Visit

### 1.0 Introduction

Having completed the accreditation questionnaire and obtained a provisional opinion as to possible exemptions from parts of the EQO, training institutions may apply for the exemptions to be approved formally. Formal approval will require a visit by a group of four ECOO nominated Opticians, Optometrists and Educationalists to assess the quality of the teaching programmes, the practical facilities and the staffing arrangements. The Visitors will then formulate a report which is considered by the Board of Management of the ECOO.

Part III offers guidance to:

- Training establishments about the expectations of the ECOO visitors in specific areas of student education and training
- The ECOO visitors in their audit of the optical and optometric training programmes. The visitors will consider evidence of the level of education and training and come to an overall judgement based on these guidelines.

Sections 2-7 of Part III indicate the nature of the information that the ECOO visitors will require for consideration before the visit and in the course of the visit. The visitors will use these sections as the basis for their audit of the education and training that the institutions are providing. The sections describe, in general terms, what ECOO expects training programmes to demonstrate in order to obtain accreditation and exemption from all or part of the EQO.

***N.B. These guidelines are written to cover all the competencies of the EQO. The self-assessment document indicates which ECOO competencies are covered in the particular training programme being considered.***

### 2.0 Optics Programme Construction

#### 2.1 Design and Structure

While not wishing to be prescriptive about the detailed structure of the programme, the Visitors will expect the programme to be well structured. The theoretical teaching should be supported by, and integrated with, appropriate supervised practical experience.

At least 30% of the programme should involve practical applications in professional (shops) settings. The latter stages of the programme, when the students develop higher levels of knowledge and practical skills, should comprise a significant part (60%) of the assessment for the final classification of the qualification.

## 2.2 European Competencies and Learning Outcomes

The Visitors will collect evidence to confirm that the EQO Competencies and Learning Outcomes claimed in the Self-Assessment document are achieved by each and every student who successfully completes the programme.

Evidence will be sought from a variety of sources including, but not limited to, the curriculum/programme specification, examination results, external examiners' reports, institutional and national quality reviews, the national professional association, representatives of employers of graduates, teaching staff, recent graduates and current students.

The training institution should demonstrate:

- how the programme matches those ECOO EQO Competencies for which exemption is claimed in Part II, the self-assessment.
- precisely where the various elements of the Competencies are covered in its programme
- that each and every student achieves all of these EQO competencies.

## 2.3 Practical Work

Each student should personally maintain an accredited record (a logbook or portfolio) of all their practical experience. This record should provide an opportunity for students to reflect on their strengths and weaknesses and include guidance and feedback from supervisors.

The Training Institution should keep a central database of all the students' experience in practical workshops and with clients. In this database a distinction should be made between "real life" clients, i.e. members of the general public attending the office (shop) for optical care, and "pre-practice" clients, i.e. volunteers or fellow students who assist in the training by acting as clients in student seminars or workshops.

## 2.4 Practical Governance

Visitors will expect to meet with the member of staff responsible for practical and governance issues.

The training institution should have a practical policy document defining adequate supervision during practical experience and the amount and range of practical experience that is necessary for the students to achieve the claimed competencies. The Visitors will expect there to be a robust system in place to ensure that these defined minima are met by all students.

### 3.0 Teaching Learning and Assessment

#### 3.1 Teaching and Learning Techniques

It is expected that both practical and non-practical teaching and learning should incorporate a range of contemporary practices that are relevant to the needs of the discipline of optics, the present needs of the students and to the likely future demands of primary health care.

The Visitors will welcome a variety of approaches to teaching and the assessment of learning as appropriate to the particular topics, including:

- lectures
- practical classes
- seminars
- workshops
- tutorials
- computer-aided learning
- practical sessions and visits
- the development of students' ability to independently manage real life situations
- ways to develop students' skills of independent self-learning, self-management, team working and peer assessment
- opportunities to participate in vision/optics.
- 

#### 3.2 Assessment Structures and Procedures

It is expected that assessment structures and procedures should:

- Include formative and summative assessments to promote scholarship and knowledge, for example, examinations (MCQs, short answers or essays), projects, dissertations and other assignments.
- Equip students appropriately for prospective first entry into a variety of practical optics environments through the formal assessment of competence in practical subjects either by a series of tests taken under examination conditions over the programme or by a final examination at the end of the programme.
- Provide sufficient feedback to students to enable maximum learning and achievement.

## 4.0 Student Progression and Achievement

4.1 The institution should provide the following information for the past three cohorts of students

- entry requirements and entry grades
- numbers applying and accepted for each of the last three years
- qualifications awarded
- employment gained

4.2 If applicable, the Institution should provide data on:

- the number and percentage of students who, following graduation from the institution, passed examinations in optics recognised by the national “competent authority”.

- 

## 5.0 Monitoring and Evaluation

ECOO expects the institution to indicate that it has a commitment to continuing quality enhancement and has in place quality enhancement procedures.

The institution should demonstrate that the following procedures are in place, that the procedures are effective and that satisfactory records are kept:

- a system of regular input from academic and professional experts external to the training institution whose advice is sought on the content, standard and contemporary relevance of the programme. The visitors would expect to see records of these discussions for the previous five years.
- a Board of Examiners with appropriate Programme and Assessment Regulations,
- appropriate mechanisms for receiving and responding to feedback from staff and students,
- arrangements for programme management and consultation (e.g. a Programme Board of Studies, Staff-Student Consultative Committee),
- an annual monitoring process, correlating the minutes of programme meetings, to include due discussion of programme data and statistics,
- a system of periodic national accreditation.

## 6.0 Staffing

6.1 Management and Leadership of the Programme

The academic unit responsible for the programme should have a senior, professionally qualified academic in a leadership position, who would normally chair

the Programme Committee or Board. This person should have appropriate technical and administrative support.

## 6.2 Teaching Staff Information

It is expected that teacher-practitioners and visiting lecturers from community practices or industry-, and appropriate persons from other health care professions, should be involved in the teaching programme.

The following information is required:

- the names of all staff teaching the programme along with their roles and their qualifications,
- the teaching hours to the optics programme of each named staff member,
- the total teaching hours for each person named on the above staffing list including contributions to other programmes within the Institution,
- an indication of any impending changes to staffing, facilities or student numbers.

## 6.3 Support Staff

The number of staff supporting the programme and any practical workshops and clinic should be listed. These should include administrative assistants, secretaries, receptionists, practical administrators and technical support staff.

## 6.4 Staff Development

The institution should provide evidence of staff development programmes for staff employed in the programmes.

# 7 Resources and Facilities

## 7.1 Physical Space

The institution should provide appropriate equipment for the practical training within the programme.

Specifically, the following information should be provided:

- a detailed list of all the physical space occupied by the programme, showing the area in square metres for all dedicated space including laboratories and facilities.
- the aggregate space under each category of lecture/tutorial rooms, teaching laboratories and practical space.
- a detailed description of the practical facility including the size and disposition of the dispensing area, the provision of workshop facilities and the size of the reception and front office facilities.

## 7.2 Laboratory Equipment

The institution should provide a list of specialist equipment provided for the programme.

## 7.3 Learning Resource Strategy

The institution should provide its policy statement on the utilisation of traditional and modern learning resources.

The range of Library and Information Technology facilities e.g. library books and journals, electronic information systems and information technology equipment systems should be listed.

## 8.0 The Visit Format

### 8.1 Panel

The visiting panel will comprise of the following:

- One optician who is involved in optical education
- One optician or optometrist who is involved in professional practice
- One educationalist, not necessarily an optician.
- The chairman will be a member of the panel

### 8.2 Schedule of Meetings

The Visit will last no longer than three days.

The panel will wish to meet the following persons:

- The head of the institution.
- The head of the programme.
- The laboratory/workshop/office (shop) manager
- The staff teaching on the programme
- Support staff
- Staff from relevant institutional services (e.g. Library, IT)
- Representatives of students from each year
- A sample of recently qualified graduates
- A sample of employers of graduates
- 

The panel will wish to observe the following

- Teaching sessions.
- Practical and professional sessions.
- The equipment and facilities.
-

During the visit the panel will wish to see examples of assessed student course work, examination papers, student logbooks of client experience.

## 9.0 Timescale of the Accreditation process.

### Week 1

- An agreement to start the process between ECOO and the Institution.
- The issuing of the Guidelines and a request for the preliminary documentation.
- The selection and briefing of the Visitors

### Week 8

- Receipt of documentation from Institution

### Week 12

- Draft agenda and visit timetable for agreement with the Institution.
- Request any further documentation required by the Visitors.

### Week 20

The visit to the institution takes place.

### Week 24

- The first draft of the written report considered and agreed by the Visitors.

### Week 28

- The agreed report is sent to the institution for factual correction.

### Week 30

- The Final version of the report is sent to the Institution and the ECOO Diploma Board of Management.

### Week 34

- Approval of the report by the ECOO Diploma Board of Management and Executive Committee and the formal award of exemptions.

## 10.0 The Written Report

The written report will take the following format:

- A brief description of the Institution.
- A description of the programme structure and organisation.
- A systematic comparison of the learning outcomes and practical training of the programme with the European Diploma Competencies.
- A recommendation of the extent of accreditation to be granted.
- The period of accreditation and the date for re-accreditation.
- Minutes of the meetings.
- 

## 11.0 Preliminary Information from the Training Institution.

Particulars of the Institution and the Programme.

- Name and address of the institution.
- Details of the nature, size and organisation of the establishment.
- Number of departments or equivalent units.
- Total number of students in the Institution.
- Name of department, or equivalent, teaching Optics.
- Number of students studying Optics.
- Level of the qualification awarded in Optics.
- Number of years study in the Optics programme.
- Full-time or part-time study.
- Number of weeks in the academic year, including exams.
- Name(s) of Optics programme(s)
- Name and qualifications of the Head of the programme.
- 

The institution is asked:

- to complete Part II, the competency Self-assessment document.
- to demonstrate how the statements in Part III Sections 2-7 are satisfied.  
*(This can be best achieved by addressing the issues raised in each section in the same sequence as presented in the Part C.)*
- to provide written evidence supporting each section or to indicate where the evidence is located in existing institutional documents. e.g. internal or external programme reviews, the programme specification, the examination regulations, student handbook, practical/professional handbook, etc.

**Finally**, the Institution should indicate the level of accreditation that it seeks against the EQO and the Parts and/or Sections from which it seeks exemption.

***Please note:***

***In completing the information required by ECOO it is recognised that the guidelines are written to cover all the competencies of the EQO and that that many programmes will not cover all aspects of the EQO.***

***In the self-evaluation the Institution should clearly indicate which of the Competencies they consider are achieved by graduates of the programme.***

## Part IV: The EQO Portfolio - Guidance for Candidates and Examiners

### Introduction

Congratulations on your decision to enter for the European Qualification in Optics. The Qualification is set at a minimum entry standard for dispensing optics in Europe. To demonstrate you have achieved this standard you need to keep a record of all the practical experience that you have had, either as a student in supervised laboratories, workshops and clinics, during externships or in your professional practice following graduation.

To complete Section 2 you should select 100 cases seen over the last two years that demonstrate your optical knowledge and skills. For 50 of these cases full evaluation details are not required but you must include in the Portfolio a list of these cases, in the format shown on page 4, so that these client records can, when necessary, be retrieved from the practice and examined by representatives of the EQO.

The remaining 50 cases are to be submitted with the portfolio in sufficient detail to demonstrate that you have been offering optical care at the EQO scope of practice. These should be challenging cases that demonstrate the range of your practical optical skills and knowledge. 2 detailed records are required under each of the headings given in Section 3 (Page 5).

**Note: Page numbers will be completed when the format for the Portfolio is agreed**

### Portfolio Guidance

The Portfolio provides ECOO with the evidence to that you have the client experience and practical skills to offer optical care at the level of the EQO. This Guidance is for Candidates and Examiners and its purpose is to suggest what level of detail might be expected in the case records and in particular how to present these data in the 2 detailed case studies. In addition the candidate will be required to present evidence of 2 number of hours of supervised practical and in office (shop) dispensing.

Guidance is given below on each of the three sections of the Portfolio to help the Candidate when writing up the portfolio and the Examiner when assessing it. It is hoped that this guidance will ensure consistency in the evaluation of the practical and client experience data by examiners from ECOO and by the departmental staff of fully accredited institutions.

*N.B. A satisfactorily completed Portfolio or an "accredited as equivalent" record of client experience is required for all EQO candidates.*

## Guidance for Candidates: Completion of each Section of the Portfolio

### Section 1. Candidate details

In this section the Candidate provides his/her name and address and contact details. A copy of the Candidate's passport or identity card is to be enclosed with the Portfolio.

The remainder of this section then defines which of the possible educational routes the Candidate has followed to reach the stage of submitting the Portfolio and lists what supporting evidence is required.

A) By graduation from a fully accredited institution including the practical and in office (shop) experience and the required amount of supervised practice experience

B) By graduation from an institution accredited for the practical and theoretical competencies but not the practical and in office (shop) experience and the required amount of supervised practice experience. The Candidate completes a Portfolio after graduation containing any suitable practical and client experience gained within the training programme and further client experience gained as a qualified optician.

Information required: The name of the training programme, the name and address of the training institution, the starting and finishing dates of study at the institution. A certified copy of the national (professional) diploma and/or university diploma.

### Section 2: Evidence of Practical Experience.

The objective of this section is to broadly define the nature and extent of the Candidate's optometric experience on the basis of the approximate numbers of clients seen over the last two years.

Information required: Date of qualification as an optician, years of practice as an optician, date of qualification as an optometrist, years of practice as an optometrist, copies of certificates, the names and addresses of practices, hospitals (see Section 4, page 6 of the Portfolio).

Approximate clients and workshop numbers over the last two years divided into:

- Ophthalmic dispensings
- Workshop experience

Supporting evidence.

A list of ? clients presented in the format indicated on page ? of the Portfolio, with each client classified into the appropriate group(s).

The ? clients should not be identified by name but by a unique reference number that will permit the original record card to be retrieved from the practice if it is requested by the examiner.

Section 3: Evidence of scope-of-practice.

The requirement of this section is that the candidate presents ? detailed case records that demonstrate experience of the whole range of dispensing and workshop practice at the level of the EQO. These should cover the following subject headings:

Dispensing to real life clients:

- Paediatric Dispensing
- Rx from +/- 5.00 to +/- 9.75
- Rx over +/- 9.75
- Bifocals
- Progressives and Trifocals
- Occupational dispensing
- Referral involvement for pathological reasons
- Sports eyewear dispensing
- A prescription for gross anisometropia
- Prescribed tints
- Personal eye protection
- Low vision

Workshop:

Cut edge and fit both glass and plastic lenses to a range of different power lenses and spectacle frames of different designs and materials.

- Rx power from Plano to +/- 5.00
- Rx power above +/- 5.00 to +/- 10.00
- Rx power above +/- 10.00
- Bifocals and trifocals
- Progressive power
- To plastic full rimmed frames
- To metal full rimmed frames
- To nylon supras
- To rimless mounts

Record Format for the 50 detailed case records.

There is a standard record card format for the detailed cases. The clients should not be identified by name but by a unique reference number that will permit the original record card to be retrieved from the practice if it is requested by the Examiner.

The management must be evidence-based and as far as is possible the evidence should be included in the record

The important thing is that in each of these case records the candidates should demonstrate:

- their understanding of the client's problems,
- how they decide which frames and lenses are appropriate,
- how they interpret the prescription,
- how they came to a final decision on the frame and lenses,
- the advice given to clients on the use of the spectacles

Further Guidance for Candidates who are not familiar with presenting Detailed Case Studies.

The following list of headings and content might be useful when deciding on how to present a particular case. These are just suggestions for you to consider and obviously not all are relevant to all clients.

- History and Symptoms (Anamnesis):
- Age, gender, ethnical background (pertinent for different facial features)
- Chief complaint
- Refractive history and current spectacles, if any.
- Occupation and recreational activities
- Any medical history that might affect the choice of lenses and/or frames

Based on the obtained information provided by the client during history taking, you should be able to provide options for the frames and lenses which would be suitable for the client.

Include how the benefits of different lenses, frames and coatings were explained and how measurements were taken.

## Management Plan:

Each dispensing should include a plan that you make on how to approach or solve the client's problems. The plan should contain pertinent information on

- How should the refractive correction be dispensed? Spectacles or contact lenses
- Specification of spectacles lenses and frame.
- Instructions for wear.

## Discussion:

Provide a brief discussion of your case. What problems did you encounter? Describe the thinking process of how you came up with the dispensing options. Describe how you came to the final decision. Why and when you want to see the client again for a follow-up.

Include changes you need to make to improve the lens fitting Provide an explanation why you need to make the changes Include a follow-up visit with the evaluation of the adjusted lens Include the data of the lens prescribed

## Part Two: Guidance for Examiners

This advice is additional to and should be read together with the Part One: Guidance for Candidates.

Fully Accredited Programmes – Graduates of training programmes that are accredited for all sections of the European Diploma Examinations and where the programme contains client experience “accredited as equivalent” to the Portfolio, do not submit a Portfolio. They are awarded the EQO by the accredited institution on Graduation from the accredited programme.

However, to ensure equivalence between the different routes, the Examiners in Fully Accredited Institutions should consult these guidelines when assessing their students' client experience to ensure that it is at an equivalent standard to that described below.

### Notes for Examiners

Section 2: The list of 100 cases.

The clients and workshop experience presented should cover all the classifications on page ? of the Portfolio. If there is doubt about the validity of these data a request for a specified 10% sample of practice records can be made.

### Section 3: The 50 detailed cases

The assessment is based on the completeness and coherence of the record.

Points to consider:

Has the candidate gained sufficient information from the client?

Have all likely possibilities been explored?

Have inconsistencies in the findings been noted and discussed?

Is there an adequate description of the occupational and recreational of the client?

Does the final dispensed spectacles meet the needs of the client?

Criteria:

Overall are you convinced that the Candidate understood the problems of the client, performed an adequate investigation and provided a safe and satisfactory service to the client?

Is the record convincing as a dispensing performed by a reasonably experienced, 1-2 years, and competent optician working independently with clients at the level of the EQO?

NOTE: The Candidate's investigation and management does not have to be the same as how the Examiner would have managed the client!

-END-

## Part IV: Continuing Accreditation

### Introduction

Accreditation is awarded after a successful visit to the training institution. The level of accreditation awarded depends on the extent to which the training programme provides evidence that all of the graduates have achieved all of the learning outcomes, competencies and practice experience requirements of the EQO

Full Accreditation: If all parts of the EQO, the learning outcomes, the competencies and the practice experience, can be shown to be taught and assessed within the training programme to a standard equivalent to the EQ then Full Accreditation will be awarded.

On graduating from a Fully Accredited programme and paying the fee to ECOO (at present €100) graduates receive the EQO along with their academic qualification.

Partial Accreditation: If not all parts of the European Diploma are taught and assessed within the training programme to a standard equivalent to the EQO, then Partial Accreditation will be awarded.

On graduating from a Partially Accredited programme graduates receive a certificate listing those parts of the European Diploma from which they are exempted.

If a graduate wishes to gain the EQO they will be required to provide evidence that they have undertaken successfully undertaken further assessment in the sections not previously exempted and/or submit the ECOO Portfolio of practice experience.

## 2. Record of Full and Partial Exemption.

Each year, Partially and Fully Accredited institutions are required to keep a record of the names of their graduates and the awarded level of exemption from the European Diploma. A copy of this list should be sent to ECOO and will be used as a permanent record of holders of the EQO and where appropriate to confirm the extent of exemption if the graduate subsequently applies to take the examinations for the remaining sections of the EQO.

## 3. Continuing Accreditation

Full and Partial Accreditation is normally awarded for a maximum of five years, subject to the following conditions.

- Submission to ECOO of a list of the names of the accredited graduates within one month of the end of the academic year.
- Submission to ECOO, before the start of the next academic year, of a certificate confirming that there has been no change in the content, mode of delivery or students' client experience of the accredited training programme.

OR: If there have been any changes to the accredited training programme, to submit a detailed list of the changes, the rationale for the changes and the expected effect on the competencies and practice experience of graduates.

On receipt of this annual report it will be for ECOO to decide:

- if more information is required,
- if the level of accreditation should be increased or reduced,
- if a further visit is necessary.

N.B. The European Council of Optometry and Optics reserves the right to give full or partial accreditation for a period of less than five years, to specify the requirements for continuing accreditation and to make further visits to ensure that the accredited standard is being maintained.

## Part V Financial Aspects of Accreditation

The EQO scheme is designed to be self-funding with all costs covered by the applicant institutions. A daily fee is paid to Visitors to cover their time commitment and an honorarium is paid to the Chair of the Accreditation Panel. Applicants will also be expected to cover the costs of travel and accommodation where this is necessary.

Students graduating with the European Diploma would also be required to pay a fee of €100 to cover the award of the Diploma.

The applicant institution will be liable for charges that depend on the extent to which it engages with the Accreditation Scheme. The purpose of this document is to list these charges and make it clear to applicant institutions the extent of their potential costs.

All costs will be reviewed periodically and updated versions of this document will be available on the ECOO website.

The Accreditation process and estimates of the related costs

Parts I to IV of the Accreditation Scheme describe the various stages of the process in chronological order and should be consulted in conjunction with this document.

The Accreditation Scheme allows for either a full accreditation process or benchmarking for those schools which do not want to undertake the full accreditation scheme but want to find out how their course aligns with the EQO. The fees for both are set out below.

It is not possible to estimate the costs of travel and accommodation, which will vary depending on the location of the school being accredited. As a guide, the preliminary visit will involve travel, overnight accommodation and meals for two Visitors. The panel meeting, which follows the receipt and analysis of the self assessment document, will involve travel for four Visitors to an easily accessible venue. The full Visit will involve travel, accommodation for three nights and meals for four Visitors.

The timescale for completing the process is dependent on how long the applicant takes to complete the self assessment form and to respond to requests for further information. If there are no delays it should be possible to complete each stage in three months with a total time to final approval by ECOO within 12 months from the initial expression of interest.

## Fees for Full Accreditation and Benchmarking

### Fees for Full Accreditation\*

Stages at which the fees are payable

|                                |                 |
|--------------------------------|-----------------|
| Preliminary Visit**            | €1080 (1700)*** |
| Review of Self Assessment Form | €1990 (3000)    |
| Visit                          | €3790 (5700)    |
| Final Report                   | €640(1700)      |
| Total                          | € 7500(12100)   |

### Fees for Benchmarking\*

|                                |              |
|--------------------------------|--------------|
| Preliminary Visit**            | €1080 (1700) |
| Review of Self Assessment Form | €1990 (3000) |
| Final Report                   | €640(1700)   |
| Total                          | €3710 (6400) |

\*\*Includes all preliminary work and support up to the submission of the Self Assessment form.

\*Does not include costs for travel and accommodation which will be charged at cost

\*\*\* ED figures in brackets (these figures are for discussion)

Subsequent visits to approve progress from partial to full accreditation.

- Visit fee per day for each Visitor plus travel and accommodation €450

## Diplomat Registration

Each graduate awarded the EQO by Accreditation will be required to pay a one off registration fee of €100. These fees are to be collected by the accredited institution and transferred to ECOO. Once ECOO is informed of the final number of diplomates, the Secretariat will issue an invoice.

## Continuing Accreditation

Accreditation will normally be given for five years but may be for a shorter period. Renewal of accreditation will require a full visit. The fee for this will be €8,100 not including travel and accommodation.

As can be seen the actual costs may vary substantially depending on travel and accommodation arrangements.

Any enquiries regarding the costs should be addressed to the Chairman of the Accreditation Committee.

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