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# **Diploma and Apprenticeship in Ophthalmic and Vision Science**

## About the Association of Health Professions in Ophthalmology

The Association of Health Professions in Ophthalmology promotes the practice, education, training and research in the field of ophthalmology and vision science throughout the United Kingdom by promoting high standards of care and treatment of patients with disease or disability affecting the eyes or vision, advancing public education in ophthalmology and vision science, and representing the needs and interests of ophthalmology and vision science in the provision and advancement of health care.

The Diploma and Certificate in Ophthalmic and Vision Science are being developed within the Modernising Scientific Careers framework for healthcare science staff at Levels 1 – 4. AHPO is offering these qualifications to ensure that staff undertaking a range of diagnostic tests have an appropriate level of knowledge and skill to deliver a high standard of care to patients.

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# Diploma / Apprenticeship in Ophthalmic and Vision Science



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## 1. Studying the Diploma in Ophthalmic and Vision Science

### 1.1 Introduction

The Diploma in Ophthalmic and Vision Science is a qualification designed to meet the learning needs of ophthalmic staff working in eye units and clinics at Career Level 4. It is part of Modernising Scientific Careers, a Department of Health UK-wide initiative to develop a career framework, education and training programmes and apprenticeships for the healthcare science workforce. There are three divisions in the healthcare science workforce: Life Sciences; Physiological Sciences; and Clinical Engineering and Medical Physics. Ophthalmic and Vision Science is one of the disciplines within Physiological Sciences. Before Modernising Scientific Careers there were many different healthcare science job titles and roles, each with their own training programmes, but now Modernising Scientific Careers provides a common career structure and education and training pathways for the different healthcare science disciplines. It is now possible for someone to begin their career as a healthcare science assistant or associate practitioner and progress to become a clinical scientist. The career pathway for Ophthalmic and Vision Sciences is presented in Table 1.

**Table 1: Ophthalmic and Vision Science Career Framework**

CF*	Grade	Training Programme	Awards and Qualifications
3	Ophthalmic Assistant Practitioner	Ophthalmic Assistant Practitioner Vocational/CPD programme and Ophthalmic Assistant Practitioner Apprenticeship**	Certificate in Ophthalmic and Vision Science and Ophthalmic Assistant Practitioner Apprenticeship
4	Ophthalmic Associate Practitioner	Ophthalmic Associate Practitioner Vocational/CPD programme and Ophthalmic Associate Practitioner Apprenticeship	Diploma in Ophthalmic and Vision Science (equivalent to a Foundation Degree) and Ophthalmic Associate Practitioner Apprenticeship
5	Ophthalmic Science Practitioner	Practitioner Training Programme (PTP)	BSc (Hons) in Neurosensory Sciences / OVS***
6-7	Ophthalmic and Vision Healthcare Scientist	3 Year Scientist Training Programme (STP)	MSc in Neurosensory Sciences / OVS and Certificate of Attainment
7-8	Ophthalmic and Vision Senior Healthcare Scientist	CPD, may include Accredited Specialist Expertise	
9	Ophthalmic and Vision Consultant Healthcare Scientist		

\*Career Framework    \*\*The Apprenticeship is also the award    \*\*\*Ophthalmic and Vision Science

For further information about the Modernising Scientific Careers programme and careers in healthcare science see:

[www.nhsemployers.org/~media/Employers/Documents/Plan/ExplainingTheFacts\\_Br0935\\_6a%20as280114.pdf](http://www.nhsemployers.org/~media/Employers/Documents/Plan/ExplainingTheFacts_Br0935_6a%20as280114.pdf)

[www.nhscareers.nhs.uk/explore-by-career/healthcare-science/careers-in-healthcare-science/](http://www.nhscareers.nhs.uk/explore-by-career/healthcare-science/careers-in-healthcare-science/)

Modernising Scientific Careers is introducing an apprenticeship programme for Career Frameworks 2 – 4. Apprentices are, by definition, new to an area of work, and staff undertaking the same work prior to the introduction of apprenticeships will be offered an identical vocational training programme as part of their continuing professional development (CPD). There will be two career levels with training programmes for ophthalmic and vision science staff in the MSC career framework 2 – 4:

Ophthalmic Assistant Practitioner	–	Career Level 3
Ophthalmic Associate	–	Career Level 4

The Diploma in Ophthalmic and Vision Science is a qualification designed to meet the learning needs of Ophthalmic Associate Practitioners. A Certificate in Ophthalmic and Vision Science is being developed for Ophthalmic Assistant Practitioners.

Ophthalmic Associate Practitioners will be able to undertake, without supervision, most routine ophthalmic tests and investigations, including visual acuity, autorefraction, focimetry, clinical history taking, slit lamp examination, tonometry, visual field assessment, biometry, fundus photography and OCT. They will understand and report on the quality and reliability of the tests but will not be responsible for interpreting the results. Staff with current job titles such as ophthalmic assistant, ophthalmic technician, visual field technician, ophthalmic photographer and ophthalmic science practitioner can apply to study for the Diploma. Ophthalmic Assistant Practitioners will undertake a smaller range of tests and investigations, generally under supervision.

## 1.2 Entry requirements

The Diploma in Ophthalmic and Vision Science is a work-based programme and the student must have access to a work setting/placement and be engaged in work that includes the assessment of patients with ocular disease. The student should have the following *minimum* qualifications or equivalent:

- GCSE English at Grade C or above
- GCSE Mathematics at Grade C or above
- GCSE ICT at Grade C or above

The equivalence of qualifications to the above GCSEs will be considered on a case-by-case basis.

## 1.3 Course structure and components

The Diploma in Ophthalmic and Vision Science is a vocational programme at academic credit levels 4 and 5 and is equivalent to a Foundation Degree. The course has two levels, comparable to the first and second years of a full time Bachelor of Science (BSc), and each course level has two semesters. The OVS Diploma is flexible both in terms of course starting time and duration, and examinations and assessments can be undertaken when the student is ready. We would expect an average student new to the area of work to take 4 years to complete the diploma, and the maximum duration permitted is 8 years (4 years per course level). There is no minimum time for course completion, but we think it unlikely that the student could complete the whole course in less than 18 months to two years.

The course has 22 units, 11 of which are knowledge units and 11 are competence units. Each unit has a credit value, and each credit is considered to equate to about 10 hours of learning and study. There are 120 credits per level, thus 240 credits for the Diploma. If we assume a 45 week year, the student can expect to spend approximately 13 to 14 hours per week on training and study. This includes protected time and training in the workplace as well as home study.

A summary of the course structure is presented in Table 2.

**Table 2** Summary of the course structure for Diploma and Ophthalmic and Vision Science

Unit code	Unit name	Unit type	Assessment	Level	Credits
<b>Course Level 1, Semester 1</b>					
OVS G1	Study skills, basic mathematics, science and technology	Key skills	Evidence / Portfolio	4	6
HCS C7	The legal, ethical and regulatory context of Healthcare Science	Mandatory Competence	Evidence / Portfolio	4	3
HCS C9	Methods of investigation, treatment and management of human disease and disorders	Mandatory Competence	Evidence / Portfolio	4	3
HCS C10	Ensuring safety, security and well-being in the Healthcare Science environment	Mandatory Competence	Evidence / Portfolio	4	3
OVS G2	Human anatomy, physiology and pathophysiology across body systems, including introductory chemistry and genetics	Knowledge	MCQ exam	4	40
OVS G3	Microbiology	Knowledge	MCQ exam / Portfolio	4	5
<b>Course Level 1, Semester 2</b>					
HCS C6	The use of scientific method in healthcare science	Mandatory Competence	Evidence / Portfolio	4	3
HCS C8	Partnership working with patients, colleagues and other professionals	Mandatory Competence	Evidence / Portfolio	4	3
OVS G4	Public health, epidemiology and healthcare informatics	Knowledge	Assignment	4	10
OVS G5	Pharmacology	Knowledge	MCQ exam / Portfolio	4	7
OVS C1	Instill eye medication for purpose of investigation or treatment	Competence	Evidence / Portfolio	4	3
OVS G6	Applied physics and measurement	Knowledge	Assignment / MCQ exam	4	15
OVS K1	Anatomy and physiology of the eye	Knowledge	MCQ exam	4	10
OVS K2	Vision and the nervous system	Knowledge	MCQ exam	4	10
<b>Course Level 2, Semester 3</b>					
OVS P1	Audit and research, including an audit / research project	Project	Assignment	5	15
OVS K3	Pathology of the visual system	Knowledge	MCQ exam	5	20
OVS K4	Physical, geometric, physiological and applied optics	Knowledge	MCQ exam	5	20
OVS C2	Assessment of visual acuity, refractive error and optical prescription of visual aids	Competence	Evidence / Portfolio	5	5
<b>Course Level 2, Semester 4</b>					
OVS C3	Assessment of the ophthalmic patient	Competence	Evidence / Portfolio	5	5
OVS K5	Applied physiological measurement and instrumentation	Knowledge	MCQ exam	5	20
OVS C4	Assessment of the visual field	Competence	Evidence / Portfolio	5	5
OVS K6	Ophthalmic imaging and measurement	Knowledge	MCQ exam	5	20
OVS C5	Structural measurements of the eye	Competence	Evidence / Portfolio	5	5
OVS C6	Imaging the eye using light and lasers	Competence	Evidence / Portfolio	5	5

The majority of the course work in Level 1 is generic and provides the foundation for acquiring knowledge and understanding of ophthalmic and vision science at level 2. This does not mean that

the student will be prevented from doing any ophthalmic-related work during this time, but will work under supervision and will bring a wealth of practical experience when they begin to study the ophthalmic units.

## **1.4 Course delivery**

This is a distance learning course, and course materials will be presented in a series of iBooks hosted on iTunesU and accessed on an iPad that will be given to the student. The student will be assigned a workplace mentor, and the Royal College of Ophthalmologists (RCOphth) have agreed that this role can be undertaken by Ophthalmic Specialist Trainees (OSTs) – doctors who are in the RCOphth postgraduate training programme to become Consultant Ophthalmologists. Other staff – orthoptists, optometrists, ophthalmic nurses, ophthalmic healthcare science practitioners and scientists, and non-trainee ophthalmologists – will also be workplace mentors

## **1.5 Assessment**

At induction each trainee will be assigned an assessor who will be responsible for marking assignments and work-based projects, reviewing evidence in the portfolio, and undertaking summative workplace assessments. The assessor will have an assessor qualification.

The trainee will have an ePortfolio on their iPad, and evidence for assessment of competence will include assignments, work-based projects, assessments of performance of diagnostic tests, witness statements and interviews, as well as printouts of results of tests undertaken and practical demonstration of competence. There will be annual invigilated examinations where knowledge will be assessed with short answer and multiple choice questions that can be delivered through the ePortfolio. The ePortfolio includes an app so neither the trainee nor assessor need to be online when gathering evidence or conducting an assessment, and information is stored securely in a “cloud” for the duration of the course. Trainees who submit unsatisfactory work will be allowed two resubmissions.

Written examination will take place towards the end of each year, followed by workplace assessment of competence. The trainee must pass the examinations before they can proceed to the assessment of competence. Trainees who fail examinations will be allowed to resit.

## **1.6 Guided learning hours**

The learning time should include all the learning activities which the learner is expected to undertake in order to achieve the learning outcomes, including:

- Formal learning (classes, seminars, tutorials)
- Practical work
- Information retrieval in libraries
- Expected private study and revision
- Work based activities leading to assessment
- All forms of assessment

## **1.7 Induction**

At induction the trainee will be assigned an assessor and workplace mentor. The assessor and mentor will discuss and agree a learning plan with the trainee. The assessor will meet the trainee’s line manager, explain the requirements of the learning plan, and obtain agreement that the trainee will be given sufficient workplace training and time to achieve the learning outcomes. The assessor will also maintain contact with the trainee’s mentor to discuss and explain the delivery of the learning plan. Staff members other than the mentor may be delegated to provide training and undertake formative assessments for each unit.

## 1.8 Role of the mentor and assessor

The mentor will

- Meet with the trainee regularly to review learning and progress
- Facilitate and support learning in the workplace
- Undertake formative assessments for some modules/units
- Inform the assessor when the trainee is ready for summative assessments
- Be the trainees' support and advocate if training needs are not being met, and liaise with the assessor as appropriate over such issues.

The role of the assessor is to

- Ensure that the evidence submitted by the trainee in the portfolio is meeting the learning outcomes
- Mark the assignments and projects against the Marking Guidance provided
- Review the outcomes of formative assessments
- Undertake summative assessments
- Liaise with and advise workplace mentors and line managers if the trainee is failing to meet learning outcomes or is experiencing difficulties in obtaining adequate supervision and training.

## 1.9 Academic qualification and professional registration

The Diploma in Ophthalmic and Vision Science is part of Modernising Scientific Careers education and training for healthcare science staff at Levels 1 – 4, and will be accredited by the National School for Healthcare Science. AHPO will deliver and award the Diploma. The Academy for Healthcare Science (AHCS) will be establishing a register for healthcare science associates and assistants in 2015/16, and students who complete the Diploma can apply to join this register.

The curriculum of the OVS Diploma has the same or equivalent learning outcomes as the first two years of the Modernising Scientific Careers BSc in Neurosensory Sciences / Ophthalmic and Vision Science curriculum. No academic body is offering this BSc qualification at the present time, but if there is sufficient interest from OVS Diploma graduates, AHPO will develop a programme that would be equivalent to the third year of the BSc. Successful graduates could apply to join the Academy for Healthcare Science (AHCS) register for healthcare science practitioners through the equivalence procedure.

AHPO cannot offer accreditation for prior learning (APEL) as this is not permitted for an apprenticeship programme.

## 2.0 Application and course fees

Applications should be made through the AHPO website at [www.ahpo.net](http://www.ahpo.net). The course fees are £3,000 per level i.e. £1,500 per year for the four-year programme. Course fees include the iPad and essential textbooks in electronic format. Modernising Scientific Careers is supported by the four UK countries and applications for funding should be made to Local Education and Training Boards (LETBs) in England and the relevant bodies responsible for funding in Wales, Scotland and Northern Ireland. Link to <http://www.nhscareers.nhs.uk/explore-by-career/healthcare-science/education-and-training/assistant-and-associate-training-for-healthcare-science-careers/>