Postgraduate Medical Training

Curriculum for Ophthalmic Specialist Training (OST)

Approved by the GMC for implementation from August 2024

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1   Introduction

What is the OST Curriculum?
This curriculum defines the purpose, content of learning, process of training and programme of assessment for Ophthalmology specialty training.

Ophthalmology is a busy, mainly outpatient-based specialty, delivering both surgical and medical eye care. It is also concerned with the promotion of better eye health and early disease detection.

Ophthalmology patient care is delivered both in hospitals and, increasingly, in the community by multi-disciplinary teams.

Whilst an increasing demand for eye care needs to be met, a high-quality clinical service for patients of all ages, complexity and comorbidities must be delivered, including access to the specialist expertise and specialist surgery required to give optimum results in the areas of oculoplastics and orbit, cornea and ocular surface disease, glaucoma, uveitis, cataract, medical retina, vitreoretinal surgery, neuro-ophthalmology, ocular motility and urgent eye care.

At the completion of specialty training, ophthalmologists must be able to manage a high volume and complex workload in these Special Interest Areas (SIAs).

How will the OST Curriculum be implemented?
The new OST Curriculum will be introduced at the start of the 2024-25 training year (August 2024) and all doctors in training from OST1 to OST5 will transfer to the new system. OST7s on course to complete their training in or before August 2025 will stay on the current curriculum.

There will be flexibility for those in OST6 to decide with their Educational Supervisor (ES) and Training Programme Director (TPD) which curriculum will benefit their training most.

A detailed mapping exercise from the old to the new curriculum will allow evidence in the ePortfolio that is already tagged against the old curriculum to be moved to sit under the new Learning Outcomes. No evidence already recorded by doctors in training will be lost.

2   Purpose

Purpose statement
The purpose of the OST Curriculum is to train doctors to have and maintain the knowledge, skills and approach to practice that will ensure patients of all ages receive high quality ophthalmology care within integrated, collaborative eye services in the National Health Service (NHS).

Consultant ophthalmologists must be able to manage a high volume and complex workload, with clinical skills to deliver a high-quality service as well as skills in research, innovation, quality improvement techniques, including entire service transformation, management and leadership of the multi-disciplinary team.

Doctors who complete training satisfactorily will be eligible for a Certificate of Completion of Training (CCT) and can be recommended to the General Medical Council (GMC) for inclusion

onto the Specialist Register. They will be capable of independent unsupervised practice and will be eligible for appointment as an NHS consultant.

Rationale

The development of this curriculum was primarily in response to the GMC's Excellence by Design Standards for Postgraduate Curricula and the need to incorporate its Generic Professional Capabilities (GPCs) framework. The Royal College of Ophthalmologists (RCOphth) has taken this opportunity to adjust the curriculum to respond to the needs of changing service demand.

The 2017 RCOphth Way Forward report, which reviewed the issues of capacity demand in Ophthalmology in the United Kingdom (UK), showed that a rise in the aging population will significantly increase the prevalence of many common eye diseases, including cataract, glaucoma, diabetic retinopathy and age-related macular degeneration. The increased prevalence is expected to range from 44% to 68% by the year 2035, depending on the condition. A workforce that can manage this increasing demand is therefore required. Our approach to address this in terms of curriculum design and training delivery is three-fold.

- Increased focus on the generic professional capabilities, particularly leadership and quality improvement, will equip ophthalmologists with the skills necessary for service design and improvement.
- The introduction of Community Ophthalmology as a SIA will develop skills amongst consultants in this area of need.
- The introduction of a flexible indicative training time of between 5 ½ and 7 years means that the average training time to CCT will be reduced, with an increased rate of production of CCT holders.

The 2017 Shape of Training Review (SoTR) for Ophthalmology indicated that, unlike many specialties, the provision of general care, including emergency out-of-hours care, was good, with doctors maintaining the necessary general clinical and surgical skills throughout training and as consultants. It was noted, however, that service provision had evolved so that patients with more complex clinical and surgical needs were managed by consultants with a special interest in the area. This practice has evolved in order to maintain high quality surgical results, as well as achieve the efficiencies inherent in running multi-professional special interest clinics. Training had, however, not similarly evolved and more than 80% of CCT holders were undertaking post-CCT training in order to fulfil the requirements for appointment to UK consultant posts. To address this training need, advanced training in SIAs has been incorporated into this curriculum and the 7-year training envelope. This means that training previously provided in ad hoc fellowship posts can be standardised throughout the UK and the number of post-CCT fellowships that will subsequently be undertaken can be reduced, cutting overall time from qualification to consultant post.

While introducing these changes the provision of holistic care is ensured for those patients with multiple ophthalmic morbidities, and the out-of-hours provision can be maintained.

Curriculum objectives

Ophthalmology specialty training will continue to be a run-through training programme. Recruitment will be to OST1 and the indicative training time will be between 5 ½ and 7 years.

The three key objectives of the curriculum are:

- To describe specific professional capabilities that incorporate the knowledge, skills and attitudes needed to practice Ophthalmology at consultant level.
- To set the expected standards of knowledge and performance of professional skills for each stage of training, through a series of Learning Outcomes.
- To define the critical progression points at which the required standards must be achieved.

The OST Curriculum lists high-level, overarching Learning Outcomes that describe what an ophthalmologist does. It describes and will assess overall capabilities in both clinical and generic professional skills.

The curriculum employs seven domains mapped to the GPCs framework: Patient Management; Health Promotion; Leadership and Team Working; Patient Safety and Quality Improvement; Safeguarding and Holistic Patient Care; Education and Training; Research and Scholarship. The Patient Management domain is divided into the twelve SIAs listed further below.

The seven domains are divided into four 'Levels' of competence ophthalmologists will be expected to achieve at different stages of training. There are new assessment tools to evidence that the level of competence has been achieved and to allow the doctor to progress to the next stage of training.

Duration of training

Ophthalmologists in training will be expected to achieve Level 1 by the end of OST2, Level 2 by the end of OST3 and Level 3 by mid-way of OST6 in all domains, including all twelve SIAs in the Patient Management domain.

Level 1

During this stage doctors in training will acquire the basic science knowledge essential for the practice of ophthalmology, which is assessed by the Part 1 FRCOphth examination.

Achievement of Level 1 and transition to the next stage of training is dependent on the assessed acquisition of the necessary clinical skills and knowledge, and evidence of expected development of generic professional skills to work with indirect supervision in the general ophthalmology setting.

<u>Level 2</u>

At this stage the theme of general ophthalmology continues with doctors in training adopting spiral learning and demonstrating increasing independence and efficiency. They will continue to use skills of reflection and self-awareness to recognise their own achievements and limitations. They will begin supervision of more junior doctors, where this is appropriate.

At the end of this stage all doctors in training must have passed the Refraction Certificate examination to progress further. This test of knowledge involves an understanding of theoretical principles of optics, refraction and the related clinical skills, essential for higher practice.

<u>Level 3</u>

During this stage doctors in training will rotate through posts to receive mandatory training in the specific clinical skills related to the main ophthalmic SIAs. This is essential to prepare ophthalmologists to work in specialty-based hospital eye services within their capabilities. Doctors in training will develop transferable surgical skills as they move between these specialty posts and will continue to consolidate their cataract surgical skills. Progression in cataract surgery will be demonstrated by performing complete procedures, a continuous cataract complications audit and formative assessments. Other surgical and procedural skills will also be assessed formatively. Clinical knowledge will be assessed by the final Part 2 FRCOphth examination.

Throughout this stage of training, generic professional capabilities will continue to be assessed through the ePortfolio and multiple consultant assessments.

<u>Level 4</u>

During the final 18 months of the programme doctors in training must achieve Level 4 competency in at least two SIAs in the Patient Management domain and Level 4 in the other six domains, in order to complete their training and obtain a CCT. This is expected to happen for most doctors in training by the end of OST7; however, there is a degree of flexibility allowing some doctors to complete training in less time (the minimum time will be 5 ½ years).

The indicative time for the Level 4 training varies according to the SIA and is specified further below. It is expected that most doctors in training will complete Level 4 training in the Cataract Surgery SIA. Cataract surgery training will be taken throughout as currently occurs, and it is therefore expected that many will have completed the Level 4 training in Cataract Surgery by mid-OST6. This will allow focus on the other Level 4 SIAs during the final 12-18 months of the 7-year training programme.

The indicative times for Level 4 training are listed below – ranges apply to some SIAs to make rotas manageable.

Oculoplastics and Orbit (i) – up to 18 months
Cornea and Ocular Surface Disease (ii) – up to 18 months
Cataract Surgery (iii) – 6-12 months, which should be integrated longitudinally across the entire training programme
**Glaucoma (iv)** – up to 18 months
Uveitis (v) – 12-18 months
Medical Retina (vi) – 12-18 months
Vitreoretinal Surgery (vii) – up to 18 months

Ocular Motility (viii) – 12-18 months
Neuro-ophthalmology (ix) – 12-18 months
Paediatric Ophthalmology (x) – 12-18 months
Urgent Eye Care (xi) – 6-12 months
Community Ophthalmology (xii) – 6-12 months

It should be noted that the training years described for the acquisition of competence for each level are the latest point at which this can be achieved (without a training extension). By ensuring the curriculum and progression against it is outcome based, doctors in training will progress earlier if they are assessed competent to do so. This, together with the varying indicative times for Level 4 training in the different SIAs, means that doctors in training could meet the required standard for CCT by 5 ½ years, although for those undertaking SIA training with more complex surgery this would continue to take up to 7 years. This flexibility is illustrated below.
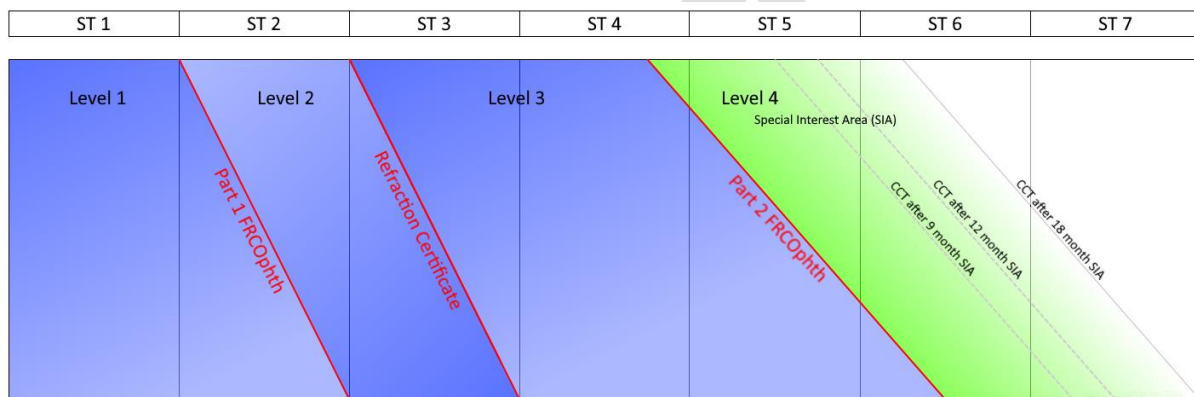
Progression through the Levels of Competency within the training pathway can occur at varying times, as indicated.
Examinations can be taken at any point prior to, or within, training as agreed with the Examinations department, but are required by the boundaries shown above.
Transition from one level to the next will be possible after satisfactorily completing the training requirements, which will include the examination as indicated above. For example, progression from Level 1 to Level 2 can occur at any point within ST2, on completion of Level 1 competencies, and attainment of the Part 1 FRCOphth examination.

Incorporating GMC standards
The OST Curriculum is designed to support and encourage training and clinical practice in line with Good Medical Practice (GMP). The GPCs framework provides the educational articulation of GMP and, as described, the curriculum is framed around these. These standards are a compulsory minimum regulatory requirement for all doctors in training, ensuring quality, consistency and flexibility across postgraduate medical training.

It is the responsibility of the local office of the Statutory Education Body (SEB) to ensure compliance with these standards for ophthalmic training. Training delivery must also comply with the requirements of the Reference Guide for Postgraduate Specialty Training in the UK (also known as the Gold Guide), which is maintained by the Conference of Postgraduate Medical Deans (COPMeD) on behalf of the four SEBs.

The role of trainers
Doctors in training will be assigned an ES and a Named Clinical Supervisor (NCS) for each post.

Supervisors will be familiar with the concept and content of the OST Curriculum and syllabi, as well as the Programme of Assessment. They will be clear about the high-level Learning Outcomes required to progress at each level of the curriculum and be familiar with the

syllabus in order to understand the evidence required to assess these capabilities, and to proactively plan training in a post with the doctor in training they are supervising.

Assessors will understand their responsibility in completing a summative assessment and be clear about the evidence that they require to make this. They will give clear, fair and developmental feedback verbally, and will record this appropriately in the assessment forms. They will use feedback given by themselves and others to plan future training opportunities with the doctor in training. They should employ formative assessment tools for Supervised Learning Events (SLEs) to augment more informal feedback and recognise that these tools are helpful to stretch the doctor in training, act as a stimulus and mechanism for reflection and provide an opportunity for the doctor in training to receive developmental feedback. SLEs are also particularly useful where a doctor in training is not achieving competencies expected for their stage of training.

Trainers and doctors in training with be provided with a Training Toolkit to ensure that standards are upheld and levels of performance are consistent, fair, open and transparent. Supportive feedback should build on strengths and identify areas for development.

Flexibility

The OST Curriculum is based on the high-level Learning Outcomes of the GPCs framework and development of these skills begins in the OST1 year. As such, doctors in training transferring to another specialty will have clear evidence in their ePortfolio of acquisition of these relevant generic skills. Likewise, a doctor in training transferring to Ophthalmology from another specialty would be able to use evidence of generic professional capabilities acquired elsewhere to satisfy the curricular requirements.

Clinical, procedural and practical skills are essential and very specific to Ophthalmology and, except for Medical Ophthalmology, will not have been acquired in other specialty training programmes. However, where doctors in training have developed generic skills and clinical maturity with training in other specialties, they may be able to accelerate through Ophthalmology training, as the acquisition of the specialty specific skills allows.

The OST Curriculum will allow ophthalmologists to train in academic medicine alongside their acquisition of clinical and generic capabilities.

The RCOphth continues to work closely with Medical Ophthalmologists, whose curriculum is overseen by the JRCPTB. A representative of each group sits on the other's curriculum development committee. A point of entry to the Medical Ophthalmology programme has been defined following completion of Level 1 Ophthalmology training.

Less-than-full-time (LTFT) training

All aspects of the OST Curriculum allow for LTFT training. Those on such arrangements should assume that their maximum clinical training will be of a duration pro-rata with the time indicated. Progression is, however, outcome based, and doctors in training may progress more quickly.

LTFT doctors in training should undertake a pro-rata share of the out-of-hours duties required of their full-time colleagues at the equivalent stage.

Scope of Practice

On completion of the OST Curriculum, new consultants will be clear about their role in the integrated eye services in the NHS. As well as generic professional skills, they will have mastered specialty skills to assess a patient clinically, order and interpret appropriate investigations and then manage the patient's clinical care based upon an understanding of basic and clinical sciences. They will be competent in a range of practical and surgical skills to manage acute out-of-hours care and deliver a general ophthalmology service. They will be familiar with the clinical skills colleagues with a SIA offer, and will be aware of their own limitations in SIAs, referring on where it is appropriate for the patient. They will be able to communicate effectively with patients and those concerned with the patient's care, and will practise with appropriate attitudes and ethics.

A new consultant will also have developed the higher clinical and surgical skills required for management of patients in two or more SIAs including: oculoplastics and orbit; cornea and ocular surface disease; glaucoma; uveitis; cataract; medical retina; vitreoretinal surgery; neuro-ophthalmology; ocular motility; paediatric ophthalmology; urgent eye care and community ophthalmology.

Those completing the curriculum will be able to lead the multi-disciplinary team and assure the quality of the care delivered to patients, applying their skills in health promotion, governance, quality improvement, research, innovation, teaching and training. They will have a commitment to continuing personal development.

Development

The OST Curriculum has been developed with input from doctor in trainings – including the Ophthalmologists in Training Group (OTG) – consultants actively involved in delivering teaching and training across the UK, employer representatives and representatives from the RCOphth Lay Advisory Group (LAG). The work has been principally undertaken by the RCOphth Curriculum Sub-committee in close consultation with the RCOphth Training Committee, which is composed of Heads of School and TPDs representing all Postgraduate Deaneries and HEE local offices.

Advice about syllabi content and indicative training times for the SIAs, particularly in Level 4, has been sought from professional bodies, the Specialist Societies. Specific advice has been provided by academic ophthalmologists and an educationalist.

The purpose statement has been scrutinised by the GMC's Curriculum Oversight Group (COG) and the curriculum has been confirmed as meeting the needs of the health services of the four UK nations.

Groups invited to feedback during a public consultation about the curriculum have included:
- All ophthalmologists in training
- TPDs not sitting on the RCOphth Training Committee
- Trainers (Educational and Clinical Supervisors, College Tutors, Regional Education Advisers, Regional Representatives, assessors)
- Staff grade, Associate Specialist and Specialty doctors (SAS)
- All RCOphth membership
- Lay representatives and members of the public
- Other Medical Royal Colleges

3   Content

Learning Outcomes

The high-level, overarching Learning Outcomes capture the skills, knowledge and behaviours required by ophthalmologists in training and are mapped to the GPCs framework.

This represents a move away from the multiple learning outcomes used in the OST Curriculum (2010) to describe each of the constituent parts of a capability and the more granular assessment of competencies.

Syllabi

The syllabi underpin the Learning Outcomes and list descriptors that will provide further guidance on how to demonstrate satisfactory achievement of the outcomes. *(PM: Annexes 1, i-xii – Other domains: Annexes 2-7)*

Programme of Assessment

The Programme of Assessment specifies the range of assessment tools to be used by ophthalmologists in training to develop and demonstrate their knowledge and skills throughout their time in training.

Learning will take place in a variety of settings, with a range of approaches. Most events in the workplace will contribute to the learning process. Ophthalmologists in training are encouraged to utilise all available opportunities, as well as manage their study leave, to work towards achieving the Learning Outcomes and meeting the needs within their Personal Development Plan (PDP). *(Annex A – see below)*

4   How to use the OST Curriculum

The OST Curriculum must be used in conjunction with the syllabi, which provide instructions and guidance on how to meet each Learning Outcome and which capabilities must be evidenced by the doctors in training in their ePortfolio. The Assessment Strategy *(Annex A)* provides further detail on the assessment tools to be used throughout training. The Assessment Blueprint *(Annex B)* lists the assessment methods mapped to the high-level, overarching Learning Outcomes.

Table 1 and *table 2* contain the Learning Outcomes required by all doctors in training working towards a CCT in ophthalmology.

Table 1 – Learning Outcomes

Domain	Level 1	Level 2	Level 3	Level 4
1. Patient Management	*See Table 2*			
2. Health Promotion	Provide appropriate lifestyle advice. Adopt local and national guidelines of prevention of infection. Advise appropriately about the systemic side-effects of drugs. Know the principles of screening. Use and promote means of eye injury protection.	Be aware and respect the impact of social, economic, cultural and religious factors on health. Have detailed knowledge of National Screening Programmes especially with reference to Ophthalmic diseases.	Demonstrate leadership in the promotion of eye and general health in the wider community. Promote immunisation.	Develop special interest area-specific guidance for health promotion. Be an effective supervisor and leader in the area of health promotion.

3. Leadership and Team Working	Know about leadership competencies in the nine behavioural dimensions as defined by the NHS Leadership Academy: inspiring shared purpose; leading with care; evaluating information; connecting our service; sharing the vision; engaging the team; holding to account; developing capability; influencing the results. Know the principles of leadership and identify areas for own development.	Document and evidence leadership behaviours. Practice within a multidisciplinary team to develop leadership projects.	Demonstrate the authority, capacity and motivation to implement change. Design own projects related to leadership and management with outcomes predetermined to reflect on success.	Critically evaluate own skills in leadership, with particular reference to the quality of patient care. Promote service improvement through: quality; innovation; productivity and prevention (QIPP); supervision of the multidisciplinary team; effective management of incidents and complaints.
4. Patient Safety and Quality Improvement	Know the principles, recognise the contribution to improved practice, and take part in clinical governance, audit and quality improvement activities.	Apply clear and appropriate clinical reasoning to make safe decisions. Practise in line with latest evidence. Maintain appropriate audits of practice.	Design and implement quality improvement programmes to improve clinical effectiveness, patient safety and patient experience. Analyse and critique published research.	Share improved practice with others and be able to defend changes made. Critically evaluate own skills in quality improvement. Promote clinical governance and quality improvement in the wider organisation / NHS.

	Identify appropriate information from a variety of data sources.	Apply quality improvement methods.		
5. Safeguarding and Holistic Patient Care	Understand and promote professional responsibility of safeguarding. Demonstrate familiarity with local safeguarding procedures and contacts. Demonstrate awareness of possibility of non-accidental injury in vulnerable patients. Document safeguarding concerns accurately and refers to senior staff.	Recognise where specialised management techniques may be necessary for those with special needs.	Take responsibility for safeguarding of children and vulnerable adults, referring and taking appropriate action. Apply mental capacity legislation in clinical practice. Apply appropriate equality and diversity legislation in clinical practice.	Critically evaluate personal and wider organisational responses to safeguarding issues. Supervise and support other professionals with regard to safeguarding. Demonstrate effective specialised management techniques for those with special needs.
6. Education and Training	Ensure patient safety is paramount in all training and learning events. Actively participate in own induction and training.	Plan and provide education and training activities for medical trainees and other professionals.	Create learning opportunities for others. Provide objective assessment. Solicit and respond to feedback on teaching,	Demonstrate readiness to act as clinical and educational trainer. Balance service and training needs.

	Deliver teaching activities under guidance.

Deliver patient education. | Give constructive feedback on learning activities. | supervision and assessment activities. | Be able to identify and support a trainee experiencing difficulty. |
| **7. Research and Scholarship** | Adopt an evidence-based approach to clinical practice.

Critically appraise existing published research.

Understand research and deliver oral presentations. | Implement an evidence-based approach to shared decision making and enhancing patient outcomes.

Demonstrate competencies for commencing clinical research.

Understand research, deliver poster presentations and improve oral presenting. | Implement service improvement by revision and development of guidelines, treatments and practical procedures using current clinical research and contemporary evidence.

Lead research / teaching sessions and critically appraise oral presentations. | Understand the principles of research methods, research governance, application of ethics to research and the translation of research into practice.

Promote innovation in ophthalmology. |

Table 2 – Patient Management

Special Interest	Level 1	Level 2	Level 3	Level 4
i) Oculoplastics and Orbit	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of oculoplastics procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform low complexity oculoplastic procedures.	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of oculoplastic cases. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of oculoplastic cases.
ii) Cornea and Ocular Surface Disease	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment	Independently assess and manage moderate complexity patients, demonstrating an understanding of cornea	Demonstrate advanced clinical management and surgical skills.

	to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform low complexity corneal and ocular surface disease procedures.	Manage the complexity and uncertainty of cornea and ocular surface disease cases. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of cornea and ocular surface disease.
iii) Cataract Surgery	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of cataract procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input.	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of cataract surgery cases. Apply management and team working skills appropriately, including in complex, dynamic situations.

	Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.		Independently perform low risk phacoemulsification cataract procedures.	Be an effective supervisor, teacher and trainer of cataract surgery.
iv) Glaucoma	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of glaucoma procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform low complexity glaucoma procedures.	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of glaucoma cases. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of glaucoma conditions.

v) Uveitis	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of practical and surgical procedures used in the setting of uveitis and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform low complexity procedures for the uveitic patient.	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of uveitis disease cases. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of uveitis disease.
vi) Medical Retina	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities.	Independently assess and manage moderate complexity patients, demonstrating an understanding of medical retina procedures and selecting the most appropriate treatment	Demonstrate advanced clinical management and practical skills. Manage the complexity and uncertainty of medical retina disease cases.

	Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	Refine the differential diagnoses and management plan by application of clinical knowledge.	according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform low complexity medical retina procedures.	Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of medical retina disease.
vii) Vitreoretinal Surgery	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of vitreoretinal procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input.	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of vitreoretinal disease cases. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of vitreoretinal disease.

	Work effectively with patients and the multi-professional team.		Independently perform low complexity vitreoretinal procedures.	
viii) Ocular Motility	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of ocular motility procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform low complexity muscle surgery.	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of ocular motility cases. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of ocular motility cases.
ix) Neuro-ophthalmology	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment	Independently assess and manage moderate complexity patients, demonstrating an understanding of neuro-	Demonstrate advanced clinical management and surgical skills.

	to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	ophthalmology procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform low complexity neuro-ophthalmology procedures.	Manage the complexity and uncertainty of neuro-ophthalmology cases. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of neuro-ophthalmology cases.
x) Paediatric Ophthalmology	Independently perform an age-appropriate patient assessment and investigation sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases.	Independently manage patients at an appropriate work-rate; employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of procedures for paediatric conditions and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately,	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of paediatric ophthalmology cases. Apply management and team working skills appropriately, including in complex, dynamic situations.

	Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.		recognising the need for special interest input. Independently perform low complexity extraocular paediatric procedures.	Be an effective supervisor, teacher and trainer of paediatric ophthalmology.
xi) Urgent Eye Care	Independently perform a patient assessment and investigations sufficient to identify, describe and interpret clinical findings to arrive at differential diagnoses. Independently formulate and initiate a management plan for low complexity cases. Justify the diagnoses and plan with reference to basic and clinical science. Work effectively with patients and the multi-professional team.	Independently manage patients at an appropriate work-rate, employing the most appropriate clinical examination equipment and investigation modalities. Refine the differential diagnoses and management plan by application of clinical knowledge.	Independently assess and manage moderate complexity patients, demonstrating an understanding of urgent eye care procedures and selecting the most appropriate treatment according to current accepted practice. Risk assess and prioritise patients appropriately, recognising the need for special interest input. Independently perform surgery requiring immediate intervention.	Demonstrate advanced clinical management and surgical skills. Manage the complexity and uncertainty of urgent eye care. Apply management and team working skills appropriately, including in complex, dynamic situations. Be an effective supervisor, teacher and trainer of urgent eye care.

| xii) Community Ophthalmology | Understand the role of a Community Ophthalmology Service.

Communicate and deliver feedback to referrers and patients to support integrated care. | Be aware of common public health issues and requirements specific to ophthalmology.

Understand the environmental impact of eye health. | Understand the provision of community ophthalmology and screening programmes.

Understand the epidemiology of eye disease and visual impairment and public health approaches to blindness prevention.

Understand the role of commissioning in eye health care. | Demonstrate advanced skills necessary to assess the eye health needs of a population and analyse local priorities.

Evaluate design and delivery of care pathways.

Demonstrate skills to assess and assure high quality outcomes in Community Ophthalmology Services.

Be an effective clinical leader, supervisor and trainer of the multi-disciplinary team. |

5 Curriculum Governance

The RCOphth Curriculum Sub-committee, which works under the auspices of the RCOphth Training Committee, will manage a process of regular reviews of the OST Curriculum to ensure it remains fit for purpose, reflecting future training and service needs.

They will consider and respond to ad hoc communications from ophthalmologists in training, trainers, RCOphth members, SEBs, other Royal Colleges, patient interest groups and others with regard to curricular content. They will also continually review the OST Curriculum content by way of a rolling programme of review.

It is intended that the RCOphth will have the authority to use its internal governance processes to update autonomously the descriptors within each syllabus, retaining an audit trail of changes, with only changes to the mandatory content (the Learning Outcomes) requiring a formal submission to the GMC.

6 Equality, Diversity and Fairness

As part of the development of the OST Curriculum and its accompanying Programme of Assessment, the RCOphth considered any actual or potential impact the transition and implementation will have on those with protected characteristics, as defined in the Equality Act (2010). The impact assessment also included consideration of any likely effect on doctors training LTFT, as these form a sizeable proportion of the ophthalmic trainee population.

Curriculum content was authored and reviewed by a diverse body of clinicians with a range of protected and other characteristics. Careful consideration of the Learning Outcomes was undertaken to ensure that there is a clear rationale for any mandatory content and no unnecessary barriers to access or achievement have been introduced. Beyond the mandatory requirements, the assessment tools can be deployed in a flexible and tailored manner, meeting the requirements of the individual doctor in training.

OTG members and other representatives are satisfied that the approach taken should not disadvantage doctors training LTFT compared to their full-time counterparts.

7 The Training Programme

The organisation and delivery of postgraduate training is the responsibility of the SEBs of the four UK nations: Health Education England (HEE), NHS Education for Scotland (NES), Health Education and Improvement Wales (HEIW) and the Northern Ireland Medical and Dental

Training Agency (NIMDTA). A TPD will be responsible for coordinating the run-through ophthalmology training programme. In some regions in England, the local organisation and delivery of training is overseen by the Head of School of Ophthalmology.

Progression through the programme will be determined by the Annual Review of Competency Progression (ARCP) process.

The sequence of training should ensure appropriate progression in experience and responsibility. The training to be provided in each training post should be defined to ensure that, during the programme, the curriculum requirements are met and that unnecessary duplication and educationally unrewarding experiences are avoided.

TPDs will map the Learning Outcomes that can be met in the available posts and work with local College Tutors to adapt timetables accordingly to ensure full curriculum coverage during the training programme.

Level 1 and Level 2 training can largely be delivered in a general ophthalmology environment and working in any SIA would be suitable. A wide variety of experience could be gained in an urgent eye care setting. It should be ensured that doctors in training are exposed to patients of all ages in order to achieve their curricular requirements at these levels.

Training in cataract surgery should begin during Level 1, commencing with supervised training in a simulated surgery environment.

In Level 3 training, ophthalmologists will need to work in each of the twelve Patient Management SIAs.

- Oculoplastics and Orbit
- Cornea and Ocular Surface Disease
- Cataract Surgery
- Glaucoma
- Uveitis
- Medical Retina
- Vitreoretinal Surgery
- Ocular Motility
- Neuro-ophthalmology
- Paediatric Ophthalmology
- Urgent Eye Care
- Community Ophthalmology

A single rotation post could incorporate work in more than one SIA in order to allow completion of all Learning Outcomes up to and including Level 3 by mid-way through OST6. An out of hours / on-call commitment will usually be necessary to ensure sufficient exposure to emergency ophthalmology. Training in cataract surgery should continue throughout this period.

In Level 4 training, ophthalmologists will require exposure to just two SIAs. Where a SIA is selected that requires complex intra-ocular surgical skills (Cornea and Ocular Surface Disease, Glaucoma and Vitreoretinal Surgery), Level 4 Cataract Surgery should have been achieved prior to commencing this second Level 4 SIA.

General ophthalmology and emergency surgical skills should be maintained during this training period by continuing exposure to emergency / on-call ophthalmology.

All training should be conducted in institutions which meet the GMC standards for training and education. Ophthalmologists in training will be allocated appropriately trained supervisors who must be actively involved in practising ophthalmology. Each ophthalmologist in training will have a single ES but may have several Clinical Supervisors (CSs) in each post. Where this is the case, an NCS should complete an Entrustable Professional Activity (EPA) assessment for the post. Other members of the multi-disciplinary team will contribute to the feedback and assessment of doctors in training by way of a Multi-Assessor Report (MAR).

Outpatients

Ophthalmologists in training should be involved in seeing patients in the out-patient setting from the beginning of their training. They will work closely with the multi-disciplinary team, including nurses, technicians, optometrists, orthoptists and advanced practitioners. Once they have acquired the skills to use ophthalmic equipment to examine patients and knowledge to describe their findings, they can begin to be supervised with first direct and then indirect supervision.

By the end of Level 1 training, they will be independently developing differential diagnoses and making management plans for low complexity general ophthalmology patients. In Level 2, they should see increasing number of patients in a clinical session, as they develop their skills and knowledge and become more efficient. In Level 3, they will attend SIA clinics to develop their skills and knowledge to the level of a general ophthalmologist. They will work according to SIA guidelines and recognise when referral for specialist expertise is required. In Level 4, ophthalmologists in training will require further exposure to special interest clinics in their chosen Level 4 SIA, in order to develop the knowledge and skills of an ophthalmologist specialising in this area.

As they progress through the training programme, ophthalmologists will increasingly be involved in the teaching and training of more junior colleagues and the multi-disciplinary team. These skills will be taught and assessed along with their clinical skills. In Level 4 training they will be involved in the assessment of others, so that they are trained to act as a CS by the time they achieve their CCT.

The choice of clinic / experience should be driven by the educational needs of the ophthalmologist in training, as identified by the latter and their ES.

Community Ophthalmology

Reflecting changes in clinical practice, training should be provided in community ophthalmology. Ideally, this should be delivered with some community experience, including knowledge of screening programmes, spaced throughout training. It is essential that the knowledge and skills for community ophthalmology are developed according to the curricula content, even where community ophthalmology is currently not well developed in a training region.

Procedures – laser, periocular and intraocular injections

Training in a variety of outpatient procedures, in particular laser treatments, periocular and intraocular injections are essential curricular requirements. These procedures will be taught initially in a supervised simulated situation, and training, including laser safety, should begin

in OST1. Ongoing exposure to procedure lists is helpful as training progresses to maintain and further refine skills, as well as treating more complex cases. Care should be taken, however, to avoid employing doctors in training in regular procedure lists, where this is no longer an educationally rewarding experience.

Surgery

Training in surgery should begin in OST1 and will initially take place in a simulated environment. All trainees must complete an RCOphth-approved 'Introduction to Phacoemulsification Course' before commencing intra-ocular surgery.

From Level 1 surgical training is essential in a) cataract surgery, b) simple procedures essential for the management of low complexity patients and c) transferable surgical skills that will facilitate training in surgical procedures essential for management of ocular trauma as well as Level 3 and 4 SIA surgery that will be developed later in training.

Doctors in training should have at least two theatre sessions per week in Level 3 training (pro-rata for those training LTFT). In Level 4 training in a surgical SIA, an increased number of theatre sessions may be essential to deliver curricular requirements, while those undertaking training in non-surgical SIAs may not require any.

No minima numbers have been set for surgical procedures, although all surgical skills are assessed by EPAs, which include longitudinal observation that have Objective Structured Assessments of Surgical and Technical Skills (OSATS) nested within them. For the Level 4 SIA that have a surgical component there is, in addition, a separate EPA for running a SIA surgical list.

Leadership and Team Working

Doctors in training will be expected to understand NHS management and clinical governance structures and demonstrate leadership competencies in all the behavioural dimensions defined by the NHS Leadership Academy.

The training programme should give them opportunity to demonstrate and receive feedback on their leadership behaviour. As they become more senior, they should have opportunity to supervise, mentor and appraise their colleagues and peers.

Patient Safety and Quality Improvement

Throughout the training programme ophthalmologists should have increasing involvement in audit and quality improvement projects, until they are leading and presenting them. By the end of training, they will be co-developing local guidelines and protocols.

They will undertake continuous audit of the complications of their personal cataract surgery and present an audit of outcomes of at least 50 cataract cases performed within 3 years of their CCT date. They will undertake personal audit of their outcomes and complications of special interest area surgery.

Education and Training

Doctors in training will be expected to demonstrate that they are competent in teaching, training and in providing effective feedback to a range of different professional groups and in a range of settings, including surgical supervision in both simulation and live surgery. This will be assessed using Generic Skills Assessment Tools (GSATs), as well as their SIA.

Research and Scholarship

Doctors in training will be expected to be competent in basic research methodology, ethical principles of research, performing a literature search, and critical appraisal of medical literature. They will actively contribute to ophthalmology research and this will be assessed using the GSAT.

The training programme must give them opportunity to develop these skills.

8 Teaching and Learning methods

The curriculum will be delivered through a variety of learning experiences and ophthalmologists will achieve the capabilities described in the syllabus through a variety of learning methods in a variety of settings. There will be a balance of different modes of learning from formal teaching programmes to experiential learning 'on the job'.

Work-based experiential learning

The majority of learning will be work-based experiential learning. Ophthalmologists in training will learn from practice (work-based training) in urgent eye care, out-patient clinics, in-patient reviews, providing an on-call service, pre- and post-operative ward rounds, theatre, the community setting and multi-disciplinary meetings. In all training environments, after initial induction and training to use ophthalmic examination equipment, trainees will review patients under direct supervision. The degree of responsibility taken by the trainee will increase as competency increases. Ophthalmologists in training should see a range of new and follow-up patients and present their findings to their CS. Learning is maximised by active participation and timely, constructive feedback.

Out-of-hours on-call

Doctors in training will be involved in the provision of an out-of-hours ophthalmology service. Appropriate supervision (direct or indirect) should be commensurate with their assessed capabilities. There should be opportunity to present and discuss patients and, where emergency procedures or surgery is required, supervision and training should be available to capitalise on these training opportunities.

Formal postgraduate teaching

There are many opportunities throughout the year for formal teaching in local postgraduate teaching sessions and at regional, national and international meetings. Doctors in training should attend a training programme organised on regional basis, designed to cover aspects of the training programme outlined in this curriculum.

There should be opportunity to participate in and present at a range of educational events including case presentations, presentation of research, audit and quality improvement projects, lectures and small group teaching, Grand Rounds, critical appraisal and Journal Clubs.

Learning with peers

There are many opportunities for ophthalmologists in training to learn with their peers. Local postgraduate teaching opportunities allow doctors in training of varied levels of experience to come together for small group sessions.

Independent self-directed learning

Ophthalmologists in training will use this time in a variety of ways depending upon their stage of learning. Suggested activities include:

- Reading, including journals and web-based material such as e-Learning for Healthcare (e-LfH) and the RCOphth INSPIRE learning platform
- Maintenance of personal portfolio (self-assessment, reflective learning, personal development plan)
- Planning, data collection, analysis and presentation of quality improvement and research work
- Leading teaching sessions, for example for undergraduate students
- Preparation for teaching undergraduates, postgraduates and non-medical staff

Formal study courses

Trainees are encouraged to attend national and regional study days and provide evidence of learning (for example, in the form of a reflection).

9 Academic Training and Research

The four UK nations have different arrangements for academic training and doctors in training should consult the local office of their SEBs for further guidance. Trainees may train in academic ophthalmology as an academic clinical fellow (ACF), academic clinical lecturer (ACL) or equivalent.

10 Out of Programme Research/Training (OOPR/OOPT)

Doctors in training may also opt to do research leading to a higher degree without being appointed to a formal academic programme. Time out of programme for research (OOPR) requires discussion between the ophthalmologist in training and the TPD. All applications for OOPR must be prospectively approved by the doctor's local Postgraduate Dean.

Some doctors in training may also wish to take time out of their approved training programme to take up training opportunities elsewhere (OOPT). Again, this must be approved by the local Postgraduate Dean. An endorsement letter by the RCOphth is required only if some of the OOP time is to count towards the CCT.

11 Glossary

Assessment – An event where an evaluative judgement is made regarding a doctor in training's knowledge or skills. Assessment can be formative and can help to guide learning and prompt reflection. It can also be summative, where an overall judgement regarding competence, fitness to practice, or qualification for progression to higher levels of responsibility is made.

Assessment Blueprint (*Annex B*) – The integrated framework of exams, assessments in the workplace and judgment made about a learner during their approved programme of training.

Assessor – An assessor provides an assessment and is responsible for interpreting the learner's performance in that assessment.

Competency – The ability to be able to do something in a competent way.

Critical progression points – Key points during the curriculum where doctors in training will transition to a higher level of responsibility. For the OST Curriculum, these points are: Level 1 (end OST2), Level 2 (end OST3), Level 3 (mid-point OST6) and Level 4 (end OST7).

Curriculum – The framework that lays out the intended aims and objectives, content, experiences, learning outcomes and processes of a programme or course of learning.

Descriptors – Mandatory capabilities which must be evidenced by the doctor in training, in their ePortfolio, to meet the Learning Outcome.

Domain – The seven areas against which all doctors in training must demonstrate capability through achievement of high-level, overarching Learning Outcomes.

Entrustable Professional Activity (EPA) – Broad areas of professional practice that can be entrusted to a sufficiently competent individual.

ePortfolio – The RCOphth online learning tool for doctors in training and their supervisors to log their activities and monitor progress through the curriculum.

Generic Professional Capability (GPC) framework – A matrix of educational outcomes that describe educational and critical capabilities that underpin core professional practice in the UK.

General Medical Council (GMC) – The regulatory body which governs medical education within the UK. All curricula for postgraduate medical education must have regulatory approval.

Good Medical Practice (GMP) – The core ethical guidance that the GMC provides for doctors.

Programme of Assessment – The framework of assessments intended to be used with the OST Curriculum, which is contained within the Assessment Strategy (*Annex A*).
The Programme of Assessment defines the specific critical progression stages that doctors in training will need to pass through in order to progress to the next level of training and the point at the end of training at which CCT can be awarded.

Protected characteristic – Defined by the Equality Act (2010) as groups who are protected by the Act. These are characteristics which may result in that individual suffering discrimination, harassment, victimisation or some other inequality of opportunity. The protected characteristics are: age; disability; gender; gender reassignment; pregnancy and maternity; race; religion or belief; sexual orientation.

Special Interest Area (SIA) – Twelve ophthalmic areas of practice within the Patient Management domain of the curriculum: oculoplastics and orbit; cornea and ocular surface disease; glaucoma; uveitis; cataract; medical retina; vitreoretinal surgery; neuro-ophthalmology; ocular motility; paediatrics; urgent eye care and community ophthalmology.

Statutory Education Bodies (SEBs) – Organisations managing the delivery of postgraduate training in the four UK nations to meet the GMC's standards: Health Education England (HEE); NHS Education for Scotland (NES); Health Education and Improvement Wales (HEIW); the Northern Ireland Medical and Dental Training Agency (NIMDTA).

Syllabus/syllabi – Supporting documents to be used in conjunction with the OST Curriculum. The syllabus includes descriptors designed to guide doctors in training and trainers in what must be evidenced to demonstrate achievement of the Learning Outcomes.

Training Committee and Curriculum Sub-committee – The RCOphth committees responsible for developing the OST Curriculum and monitoring progression after implementation.

Training programme – The combination of posts undertaken by the doctor in training enabling them to fulfil the requirements of the OST Curriculum.

Transition – The process by which existing doctors in training will move from the old to the new OST Curriculum. Detailed guidance will be provided to support this process, and all existing evidence in ePortfolio will be retained.

This document (Version 1.0) outlines the curriculum for trainees completing postgraduate training in ophthalmology in the UK. It accompanies the Programme Strategy and the curriculum syllabi.

As the document is updated, version numbers will be changed, and content changes noted in the table below.

Version number	Date issued	Summary of changes