NATIONAL POSTGRADUATE MEDICAL COLLEGE OF NIGERIA

CURRICULUM FOR SUBSPECIALTY OF OPHTHALMIC PLASTIC SURGERY

FACULTY OF OPHTHALMOLOGY

APPROVED BY THE SENATE ON 1ST DECEMBER, 2022

DR F. A. AROGUNDADE, MD FMCP

COLLEGE REGISTRAR

NATIONAL POSTGRADUATE MEDICAL COLLEGE OF NIGERIA

FACULTY OF OPHTHALMOLOGY

THE CURRICULUM

FOR

SENIOR RESIDENCY TRAINING IN OPHTHALMIC PLASTIC SURGERY SUBSPECIALTY

2022

TABLE OF CONTENTS

CHAPTER 1

PREAMBLE

1.1 Introduction and Philosophy.

Ophthalmic plastic surgery is a vast subspecialty within the field of ophthalmology comprising disorders of the eyelids, lacrimal drainage system, orbit, and to a large extent, ophthalmic tumors. Introduction of ophthalmic plastic surgery as a subspecialty in the Faculty of Ophthalmology will provide needed manpower with relevant knowledge and skills to plan, and organise resources for the management of related eye diseases in this field.
The ophthalmic plastic surgery sub-specialty curriculum will follow a training pathway that will enable trainees to develop the competencies required to support the delivery of eye care to patients with more complex and complicated disorders. Trainees will be expected to acquire skills to train at junior residency level to prevent complications arising from poor management of the common disorders as well as manage such complicated cases.
This 36-month subspecialty fellowship is intended to prepare candidates for a career as an ophthalmic plastic surgeon with knowledge and skills in the prevention and management of diseases affecting the eyelids, orbit and lacrimal drainage apparatus and ophthalmic tumors.

1.2 Vision.

To provide trained manpower in ophthalmic plastic surgery that will meet the needs of the regional and global population.

1.3 Mission.

To train ophthalmic plastic surgeons with knowledge and skills in the prevention and management of eye diseases in this field in sufficient numbers in order to address the gap of manpower shortage in the delivery of an effective, efficient and qualitative eye health both locally and at the global stage.

1.4 Aims and Objectives

i) To develop manpower for eyelids, orbit, and lacrimal drainage diseases at the specialist level for the prevention and treatment of these eye diseases

ii) To develop specialists skilled and knowledgeable in the practice of ophthalmology with particular focus on research and training in eye health system and health services.

1.5 Expected Learning outcomes

At the end of the subspecialist training in ophthalmic plastic surgery, the trainee is expected to:

a) Build on the knowledge, skills, and competencies of the junior residency years and develop into an all-round competent ophthalmologist with generic core competencies in common eye disorders, including administrative, and medical education skills

b) Be skilled in taking history and performing physical examination geared towards making appropriate diagnoses of eyelids, orbit and lacrimal drainage diseases
c) Effectively and efficiently utilise diagnostic tools/services to make diagnoses, develop management plans, and manage other common ophthalmic conditions and refer to other subspecialists as necessary
d) Effectively function as a communicator, collaborator, partner, advocate and manager in the discharge of his/her duties and obligations
e) Exhibit confidence as a trainer and health care manager and confidently be able to establish and develop tertiary level health care and training programmes for ophthalmic plastic disorders
f) Effectively teach and train resident doctors, optometrists, medical students and other allied eye health workers, as well as have the capacity and ability to provide the required mentoring and leadership in an eye care team setting
g) Competently and responsibly initiate and conduct basic, clinical, epidemiological and translational research either independently or as a research team member. The trainee is expected to develop and pursue knowledge in and advancement of ophthalmic plastic disorders through scientific enquiry, clinical research, project design and completion, along with publications and presentations at learned society activities
h) Consistently exhibit and demonstrate the highest levels of ethics and professionalism in their relationships with patients and their families, colleagues, allied eye health workers, other stakeholders in the health sector, and the society. The trainee will be expected to have imbibed the skills for maximizing personal growth and career/ life aspirations, and also, incorporating volunteerism/altruism into their life plans.

1.6 Training in ophthalmic plastic surgery

The training in ophthalmic plastic surgery shall take place in accredited training Centres of the College in Nigeria and any other place so designated.

1.7 Training Admission Requirements

a) Completion of a minimum of 24 months rotations in general ophthalmology at the Part I level of the National Postgraduate Medical College of Nigeria (NPMCN) or its equivalent
b) A pass at the Part I examinations of the NPMCN in ophthalmology or its equivalent

1.8 Mode of entry into the training programme

A written application to the Faculty of Ophthalmology of NPMCN for admission into the ophthalmic plastic surgery subspecialty training programme by a candidate gainfully employed in an accredited Centre

1.9 Components of the training

The program aims to train ophthalmologists in the diagnosis and management of common diseases of the eye in the areas of clinical evaluation, use of various investigative procedures, medical treatment, surgical intervention and research. The clinical training involves fellows working in rotation through four of the other six subspecialties (i.e., Cornea & Anterior segment, Glaucoma; Paediatric Ophthalmology & Strabismus; and Public and Community eye Health) in the first 12 months of their rotation. They will be encouraged to evaluate patients' problems in detail, using logic and clinical data to arrive at an accurate diagnosis. The trainee will be expected to provide triage services for the full spectrum of ophthalmic plastic diseases presenting to the unit, including trauma and other emergencies.

1.9 Teaching, Learning and evaluation of trainees.

a) At the commencement of the subspecialty programme, the trainee will be handed a procedure and surgical performance log book in which he/she will be expected to make verifiable entries on the procedures/surgeries performed.
b) The activities of teaching, training and evaluation should follow a well-structured plan using all recognised and accepted conventional methods. These include and are not limited to the following: Tutorials/seminars ,Grand Rounds, Journal clubs, Low vision/Refraction clinics, Case presentations with exploration of the medico-legal and ethical implication where applicable, Clinical meetings/Audits, Investigation/work-up days, Hands-on surgical training (as evidenced by Surgical and Procedures logbook), Hands-on clinical training, Wet-lab practice to precede all surgical procedures on human subjects, simulation training, virtual/E-learning methods, Video-conferencing, personal study/research days, monthly assessment of logbooks, end- of -Rotation assessments ,end-of-specialty examination.
c) Formal performance evaluations may be done at the completion of any rotation, and the format for such evaluations may be left to the discretion of the supervising consultant and the training institution. Informal feedback will be provided on a day-to-day basis to the trainee by his trainers. Evaluations will be based on performance in clinics, wards, operating theatres, teaching sessions and rounds, community activities, academic/literary output, and from feedback from other members of the health care team. Assessment of the resident's procedure and surgical log book, multiple Choice questions format, Orals, Objective structured clinical and practical examination methods may be used in evaluating these candidates at the completion of the subspecialisation training.
d) The overall supervision of the Resident lies with the Residency Training Co-ordinator.
e) Trainees will work to a level of clinical supervision commensurate with their clinical experience and level of competence. This will be the responsibility of the relevant

clinical supervisor or trainer. Centres are also encouraged to allocate personal tutors/mentors to each resident in addition to the clinical supervisor/trainer and Residency training co-ordinator. There should also be provisions for the evaluation of trainers by their trainees at the end of each rotation.

The major components of the ophthalmic plastic surgery subspecialty shall be:

f) **Clinical exposure** will combine outpatient, inpatient and surgical experience. The trainee assumes increasing responsibility for patient care, under the supervision of trainers. They learn to perform surgeries independently, and effectively follow up these cases. In addition to the clinical training, the Fellow is required to participate actively in research, presentations, publications, and in training of other ophthalmology residents and medical students in the Institution.

g) **Research exposure** will require these trainees to engage in basic, clinical, or epidemiological research and/or clinical trials and descriptive retrospective studies and develop an in-depth working knowledge of the current scientific literature of medical and surgical advances. They are expected to participate in relevant meetings/courses within and outside the National Medical College, as well as those hosted by Local, National or International Ophthalmology Societies. Trainees are also expected to participate in any on-going research projects within their training Institution in a basic or clinical field related to their area of interest. Time is allotted appropriately for this experience, and its value is enhanced by careful supervision, availability of laboratory facilities, and access to technical assistance.

h) **Teaching** exposure ensures that teaching is an integral part of the fellowship experience. The trainee is expected to be an instructor to other resident ophthalmologists, optometrists, medical students and other allied ophthalmic personnel in the training institution. The trainees are expected to present cases at Grand Rounds and participate as instructors or lecturer at educational activities in their training Institutions through practical and didactic presentations, and improve their techniques of examinations and interpretation of ancillary tests.

1.10 Duration of training

The training duration in Ophthalmic plastic surgery shall be for a minimum of 36 months for a regular resident or as may be decided by the Faculty or the College for other qualifications.

1.11 Rotations

Table 1

SN	Postings	Minimum duration	Comments	
		For post part 1 residents-36 months	Credit units	
1	Cornea & Anterior Segment senior posting	3 months	12.5	
	Glaucoma senior posting	3 months	12.5	
	Paediatric Ophthalmology and Strabismus senior posting	3months	12.5	
	Public and Community eye health senior posting	3 months	12.5	
2	Posting in core Ophthalmic plastic surgery	24 months	100	

The approved rotations will be in the specified subspecialties described in above Table 1 above. The Logbook further highlights the key cognitive, affective and psychomotor skills to be acquired during these rotations.

1.12 Ophthalmic plastic surgery (core) postings (24 months) [in modules] as follows:

a. Eyelids and Ocular adnexa – 6 months
b. Orbit - 6 months
c. Lacrimal drainage system – 6 months
d. Ophthalmic tumors – 4 months
e. Aesthetics – 2 months

CHAPTER 2

SYLLABUS/THEMES FOR SENIOR RESIDENCY

2.1 General ophthalmology – 1 year.

a) Cornea and Anterior segment - OPH 926 (12 credit units)

i) Cognitive Skills:

1. To describe the fundamentals of applied anatomy, embryology, biochemistry, physiology, microbiology, pharmacology, genetics, immunology, pathology, and optics with respect to the ocular surface, external eye, anterior segment (including lens).
2. To describe, recognize and manage all common conditions affecting the ocular surface, external eye, anterior segment (including lens)
3. To understand the indications, preoperative assessment, patient selection, and techniques in pterygium surgery, cataract surgery such as ECCE, and SICS, and the management of the associated intraoperative and postoperative complications.
4. To demonstrate a detailed understanding of all the basic and advanced diagnostic procedures applicable to the management of conditions of the cornea, external eye, anterior segment, and lens.
5. Demonstrate a detailed understanding of design and choice of IOLs, and calculation of IOL power

ii) Clinical/Technical/surgical Skills:

1. Mastering examination techniques, including biomicroscopy, vital stains of the ocular surface, and special diagnostic testing (e.g., specular microscopy, corneal topography/tomography, biometry, keratometry, high-resolution ultrasonography, anterior-segment OCT, confocal microscopy, and corneal pachymetry).
2. To perform uncomplicated contact lens fitting
3. To perform thin conjunctival flaps (e.g. Gunderson flap) and autografts, and basic non-laser refractive surgery techniques (e.g. relaxing keratotomy).
4. Demonstrate proficiency in corneal repairs and management of multiple anterior segment trauma as well as the medical/surgical management of corneal thinning and perforation, including techniques of pharmacological manipulation; and office procedures such as application of tissue glue and therapeutic contact lenses.
5. Demonstrate proficiency in all types of pterygium /cataract surgery and management of all common intraoperative/postoperative complications, including doing laser capsulotomies.
6. Conduct research relevant to cornea, external diseases, anterior segment and refractive surgeries

b) Glaucoma - OPH 927 (12 credit units)

i) **Cognitive Skills:**

1. To describe the features and management of all forms and types of glaucoma, including the relevant genetics.
2. To describe the mechanics of aqueous humour dynamics in the aetiologies of glaucoma (e.g., angle recession, combined or multifactorial glaucoma, traumatic or inflammatory glaucoma, pigmentary dispersion glaucoma) and apply the most advanced knowledge of optic nerve and nerve fiber layer anatomy to describe techniques, methods, and tools for analysing the nerve fibre layer.
3. To describe, interpret, and apply the results of perimetry, including, special kinetic and automated static perimetry strategies (e.g., special algorithms)
4. To describe the principles, indications and clinical relevance of the findings in gonioscopy
5. To describe the clinical features and management of ocular hypotony.
6. To describe the results, apply the conclusions, and critically analyse the major clinical trials in glaucoma (e.g., Glaucoma Laser Trial, Normal Tension Glaucoma Study, and Advanced Glaucoma Intervention Study), as well as describe and use other publications in the management of glaucoma patients
7. To describe the principles, indications, and complications of laser treatment in glaucoma .

ii) **Clinical/Technical/surgical Skills:**

1. To perform a comprehensive evaluation of a patient in order to confirm or rule out a diagnosis of any type of glaucoma. This may involve performing and interpreting tonometry, gonioscopy, pachymetry and perimetry etc.
2. To manage all common types and forms of glaucoma especially in juvenile and adults, including open angle glaucoma and angle closure glaucoma.
3. To perform trabeculectomy, trabeculotomy, trabeculoplasty, surgical iridectomy, combined trabeculectomy and cataract procedures and other simple laser procedures required for the management of glaucoma i.e. laser peripheral iridotomy
4. To recognise and manage glaucoma surgery bleb and flat anterior chamber complications
5. To conduct research relevant to glaucoma

c) Paediatric Ophthalmology & Strabismus – OPH 930 (12 credit units)

i. Cognitive Skills:

1. To demonstrate a comprehensive understanding of the history taking, examination methods and techniques in paediatric eye patients, including

those with strabismus (e.g. visual function tests, refraction/low vision assessment in children, complicated prism cover testing in multiple cranial neuropathy & patients with nystagmus, dissociated vertical deviation & double Maddox rod testing; techniques for assessment of visual development in complicated or non-cooperative paediatric ophthalmology patients (eg., less common objective measures of visual acuity, electrophysiologic testing).

2. To describe clinical application of the most advanced sensory adaptations (eg., anomalous head position, anomalous retinal correspondence).
3. To describe the aetiologies /clinical features of amblyopia ,strabismus, nystagmus(eg., refraction non-compliance, patching failures, pharmacologic penalization) and their management
4. To describe the aetiologies, clinical features and management of common paediatric eye conditions i.e., allergic eye diseases, red eyes, refractive errors, eye trauma, cataracts, glaucoma, corneal diseases, inflammatory conditions/uveitis, lacrimal duct obstructions, congenital and hereditary diseases, retinopathy of prematurity and other causes of leukocoria, and other causes of vision loss.

ii. Technical/surgical Skills:

1. To perform a comprehensive evaluation in a paediatric eye patient ,including history taking ,examination, investigations and refraction/low vision assessment
2. To recognise and manage common paediatric eye conditions (and refer complex cases to the paediatric ophthalmologist) such as refractive errors/low vision, allergic eye disease, corneal diseases, red eyes, cataract, glaucoma, strabismus, amblyopia, nystagmus, trauma, tumours such as retinoblastoma, congenital eyelid and eye anomalies, inherited eye disease, retinopathy of prematurity & other causes of leukocoria, sickle cell retinopathy, hyphaema, retinal detachment.
3. To perform the pre-operative assessment, intraoperative techniques and to manage postoperative complications for commonly done paediatric ophthalmic surgeries (e.g. cataracts, glaucoma, strabismus, ptosis, tumours, wound repairs, examination under anaesthesia)
4. Conduct research among a paediatric patient population group, and develop appropriate excellent communication/counselling and teaching skills with parents/guardians, medical and non-medical staff
5. Promote Community diagnosis and effective referral system for Childhood Eye Diseases.

d) Public and community eye health- OPH 931 (12 credit units)

i) Cognitive, Clinical and Technical

1. Principles and applications of community eye health and Epidemiology of blindness, and visual impairment.

Epidemiology of blinding eye diseases including tropical eye diseases, Global Blindness and Cataract epidemiology. Health systems and Organization of eye care services including outreach services and school eye services. Rehabilitation of irreversibly blind and Low vision Services. Principles of screening for eye conditions

2. Planning and managing eye care programs
Needs Assessments- Situational analysis including Equipment and infrastructure assessment. 1. What is need assessment? 2. Benefits of needs assessment. 3. Phases of need assessment. 4. Tools for conducting needs assessment: (community mapping, pairwise ranking, success ranking, group discussion, seasonal calendars, historical profiles, case studies, problem trees, focus group, questionnaire, semi-structured individual interviews, SWOC analysis, etc.) 5. Steps in understanding the needs of a community.

3. Leadership, Managing people, Team building and Mentoring skills. Leadership in eye health, Needs & Composition of eye care team: description of the eye care needs of the different regions of the world but with emphasis on the region of Nigeria situation analysis, identify gaps, factors affecting the eye care team and solutions to be addressed. Advocacy issues Principles of composition of an eye care team, roles, job description and core competencies required, Vision beyond 2020 and eye care team needs and composition, access to eye health and eyecare workforce, universal health coverage and health work force Mentoring.

4. Principles of Health Education, Promotion and Community participation and empowerment: definitions, concepts, strategies, examples, elements of health promotion, importance and benefits of community participation, community participation and eye health programmes

5. Research methodologies in public health and designing/conducting research projects.
Fundamentals of medical, research and public health ethics; and professionalism in eye care and legal issues in eye care. Evidence based researches & practices. 1. Definition of evidence-based research (EVR). 2. 2. Why evidence-based research. 3. How to plan an EVR. 4. How to bridge gap between EVR and evidence-based practice. 5. Translating EVR into optimal care with support from institutions and individuals. Proposal writing and obtaining grants.

6. Effective Communication in eye care and Community engagement\community rehabilitation
Advocacy and communication skills: what is advocacy? What is campaigning? Effective communication, Advocacy cycle, Advocacy toolkit, communication methods and media, IEC strategies, materials and development, IEC approaches, Need and process of IEC, Effective of IEC, barriers to communication, factors affecting effective communication

7. Monitoring, evaluation and Procurement systems. 1. Definitions: monitoring & evaluation. 2. Benefits/Purpose of evaluation. 3. Types of evaluation: Pre-programme evaluation (input evaluation, relevance evaluation); monitoring (Process evaluation, progress evaluation, on-going evaluation, output evaluation, formative evaluation, efficiency evaluation); impact analysis (outcome evaluation, summative evaluation, impact evaluation, programme review); clinical audit; and management audit. 4. Understanding indicators. 5. Monitoring: purpose, tools for monitoring, how to monitor. 5. Procurement systems: public procurement objective and guiding principles; Tendering committee; Tendering methods; procurement planning and budgeting; procurement of goods and works; procurement of consulting services.

Ophthalmic Plastic Surgery CORE Courses – 24 months

TABLE 2: LIST OF CORE COURSES IN OPHTHALMIC PLASTIC SURGERY AND THEIR CREDIT UNITS:

S/N	Course code	Courses	Duration (months)	Contact academic time (hrs/wk = Total hrs)	Contact Clinical/ Surgical time (hrs/wk = Total hrs)	Credit units
1	OPH 967	Anatomy and Physiology of eyelid, lacrimal system and orbit	2	4(32)	35(280)	8
2	OPH 968	Principles of management of cicatricial eyelid diseases and complex lid lacerations	4	4(48)	35(420)	16
3	OPH 969	Principles of management of ectropion	4	4(48)	35(420)	16
4	OPH 970	Trauma and management of anophthalmic socket	4	4(48)	35(420)	16

5	OPH 971	Blepharoptosis	4	4(64)	35(560)	16
6	OPH 972	Imaging in ophthalmic plastics	2	4(32)	35(280)	8
7	OPH 973	Principles of management of entropion	4	4(48)	35(420)	16
		TOTAL				100

MANDATORY COURSES:

(a) College-based courses:

Course code	Course	Duration(months)	Contact academic time in hours	-	Credit units
PMC 951	Research Methodology in Medicine Course	1 week	30	-	2
PMC 952	Health Resources management Course	1 week	30	-	2
PMC 953	Ethics in Clinical Practice	1 week	30		2
PMC 901	Advanced Trauma Life Support (ATLS)	1 week	30		2
	TOTAL				8

(b) Faculty-based courses:

OPH 933	Clinical ophthalmology Revision course	2 weeks	60	-	4
OPH 934	Advanced Community ophthalmology course	1 week +4 days hands- on	30	24 hours	3

ADDITIONAL COURSES:

PMC 998 Seminars 6 credit units
PMC 999 Thesis/ Dissertation 12 credit units

Senior Residents in Ophthalmic plastic surgery are to rotate through OPH 926, OPH 927, OPH 930 and OPH 931 (**giving 50 credit units**) in the first 12 months of training. The concluding 24 months will be devoted to core postings in the specialty (giving **100 credit units**) as well as 5

College compulsory courses (8 credit units) and 2 Faculty compulsory courses(5 credit units) to achieve **50+100+8+5+18 =181Credit units.**

CHAPTER 3

DOCTOR OF MEDICINE (MD) DEGREE IN OPHTHALMOLOGY

Admission into this MD degree programme is only for medical doctors with MBBS or MBChB degree and are already admitted into residency training programme in Ophthalmology and registered as an associate fellow of the National Postgraduate Medical College of Nigeria and is strictly by:

i. Having passed Primary FMCOph Fellowship Examination or Exemption from Primary Examination of NPMCN

ii. Having passed Part I FMCOph Fellowship Examination of NPMCN

iii. The duration of the MD is minimum of 6 semesters post Part I in an accredited training Institution.

iv. Defense for MD thesis will be conducted by examiners in the Faculty of Ophthalmology as appointed by the National Postgraduate Medical College of Nigeria (NPMCN)

Philosophy

This postgraduate MD programme will be administered by the NPMCN in accredited training institutions. Candidates will focus on the creation of new and innovative knowledge. The MD degree is primarily for individuals with goals in ophthalmology

Research or Teaching.

The NPMCN Senate oversees the MD degree programmes and its requirements, which entail coursework and independent research. Generally, the programme is for resident doctors undergoing residency training in the Faculty of Ophthalmology, NPMCN and other sister Colleges as approved by the Senate of NPMCN. It consists of course work during residency training in accredited residency training institutions during junior residency training period and first 2 years of senior residency training period in ophthalmology and independent research during the senior residency training period in ophthalmology.

The NPMCN MD degree programme ensures that Residents have a breadth and depth of knowledge in a particular discipline or area and candidate's ability to conduct research is assessed by the preparation of a written thesis.

CHAPTER 4

CORE COURSES IN THE SUBSPECIALTY

a) Anatomy and physiology of eyelids, lacrimal system and orbit – OPH 967 (8 credit units)

Objective: At the end of this course, trainees would be able to describe the most advanced eyelid, lacrimal, and orbital anatomy and physiology and gained in-depth knowledge relevant to clinical evaluation of the ophthalmic plastic surgery patient. This will be assessed using MCQ and DOPS

Learning outcomes: At the end of this period, the trainee is expected to:

Knowledge: Trainees shall be required to:

a. Anatomy and physiology

- Describe basic anatomical structures relating to the eyelids and orbit
- Describe the applied surgical anatomy of the eyelids and orbits

Topics to be covered include but are not limited to:

Bony anatomy of the orbit- (superior and inferior orbital fissure, optic canal, foramina of the skull). Trainees shall also be required to know the anatomy of the lacrimal drainage system

b) Cicatricial eyelid disease, and complex eyelid laceration repair – OPH 968 (12 credit units)

Overall Objectives
The objectives of the course (online and hands-on components) are to enable participants to:

- diagnose and assess the patient with cicatricial eyelid disease
- evaluate the options for treatment of cicatricial eyelid diseases
- demonstrate competent assessment, performance and management of eyelid corrective surgery including graft use and repair of complex eyelid lacerations

Before starting the sub-specialty program, trainees are expected to be able to:

Knowledge

- Describe in detail the anatomy of eyelid and ocular adnexa
- Explain possible reasons for development cicatricial eyelid disease

Clinical skills

- Take detailed and relevant patients' history

Technical skills

- Examine for eyelid margin misalignment and other disorders
- Examine for lacrimal drainage system injures
- Suture using micro-sutures to the tarsal plate and skin

Course topics and intended learning outcomes

At the end of the study of each topic below, participants are expected to be able to:

Epidemiology

I. Outline the prevalence of cicatricial lid disease and ocular trauma leading to complex eyelid laceration
II. Describe the epidemiology of these conditions
III. Enumerate the major risk factors for developing cicatricial disease and how to mitigate them.

The Eyelid

- Describe the Anatomy and physiology of the eyelid
- Explain the function of the glands found in the eyelid
- Describe Eyelid retraction, dermatochalasis, blepharochalasis, eyelid tumors, blepharospasm and facial nerve palsy
- Describe the process of cicatrisation affecting the eyelids, midface, and brow as it relates to ocular exposure
- Describe and recognise eyelid abnormalities.
- Discriminate between full thickness eyelid defect or laceration requiring canalicular repair and partial thickness defects

Grafts

a) Describe the types and indications for skin graft use
b) Enumerate potential sources of graft material
c) Explain the preparation of graft donor and recipient sites
d) Explain the principles of graft care including post-operative complications and their management

Cicatricial lid abnormalities

- Detail the indications, pre-operative assessment and preparation required for repair of cicatricial lid abnormalities
- Describe the surgical principles of cicatricial lid repair
- Diagnose and manage the common post-operative complications of cicatricial lid repair
- Describe the anaesthetic options for cicatricial lid repair
- Demonstrate competent performance of cicatricial lid repair including use of grafts
- Describe the cosmetic options following cicatricial lid repair

Complex eyelid laceration repair

- Detail the pre-operative assessment and preparation required for repair of complex eyelid laceration
- Describe the surgical principles of complex eyelid laceration repair
- Diagnose and manage the common post-operative complications of complex eyelid laceration repair
- Describe the anaesthetic options for complex eyelid laceration repair
- Demonstrate competent performance of complex eyelid laceration repair
- Describe the cosmetic options following complex eyelid laceration repair

TEACHING AND LEARNING
How trainees develop the knowledge and skills to enable them to achieve subspecialist learning outcomes.

Knowledge
Didactic teaching, self-study, writing comments and engaging in discussion in the virtual learning environment, watching videos and animations and checking own learning through online quizzes, clinical conferences and mortality/morbidity seminars.

Clinical skills
Learning through active observation and emulation, practice, and repeat the 'observe/emulate/practice' cycle until the trainee has developed the clinical skill well enough to meet course learning outcomes.

Technical skills
Observe and practise each skill repeatedly until course learning outcomes are met.

ASSESSMENT AND FEEDBACK
Trainees show that they are working towards the attainment of course learning outcomes. In the formative online course this will be through participation in quizzes. Face to face assessment will be through case-based discussion with mentors and developing further through regular guidance and appraisal of their progress. Trainees finally demonstrate that they have achieved course learning outcomes by passing the summative online/written test of knowledge and OSATS and DOPS for procedural skills.

c) **Entropion and Ectropion – OPH 973 and 969 (6 months)**

Overall Objectives

The objectives of the course (online and hands-on components) are to enable participants to:

- diagnose and assess the patient with entropion and ectropion
- evaluate the options for treatment of entropion and ectropion
- demonstrate competent assessment, performance and management of eyelid corrective surgery including graft use

Before starting the sub-specialty program, trainees are expected to be able to:

Knowledge
- Describe in detail the anatomy of eyelid and ocular adnexa
- Explain possible reasons for development entropion and ectropion

Clinical skills
- Take detailed and relevant patients' history

Technical skills
- Examine for eyelid margin misalignment and other disorders
- Examine for lacrimal drainage system injures
- Suture using micro-sutures to the tarsal plate and skin

COURSE TOPICS AND INTENDED LEARNING OUTCOMES

At the end of the study of each topic below, participants are expected to be able to:

Epidemiology

- Outline the prevalence of ectropion and entropion
- Describe the epidemiology of these conditions
- Enumerate the major risk factors for developing ectropion and entropion and how to mitigate them.

The Eyelid

- Describe the Anatomy and physiology of the eyelid
- Explain the function of the glands found in the eyelid
- Describe Eyelid retraction, dermatochalasis, blepharochalasis, eyelid tumors, blepharospasm and facial nerve palsy
- Describe the process of cicatrisation affecting the eyelids, midface, and brow as it relates to ocular exposure
- Describe and recognise eyelid abnormalities
- Discriminate between upper and lower eyelid position with particular reference to dermatochalasis, retraction, entropion, ectropion, ptosis, and eyelid tumours.

Grafts

- Describe the types and indications for skin graft use
- Enumerate potential sources of graft material
- Explain the preparation of graft donor and recipient sites
- Explain the principles of graft care including post-operative complications and their management

Ectropion

- Detail the indications, pre-operative assessment and preparation required for ectropion repair
- Describe the surgical principles behind ectropion repair
- Diagnose and manage the common post-operative complications of ectropion repair
- Describe the anaesthetic options for ectropion repair
- Demonstrate competent performance of ectropion repair

Entropion

- Detail the indications, pre-operative assessment and preparation required for entropion repair
- Describe the surgical principles behind entropion repair
- Diagnose and manage the common post-operative complications of entropion repair
- Describe the anaesthetic options for entropion repair
- Demonstrate competent performance of entropion repair

TEACHING AND LEARNING
How trainees develop the knowledge and skills to enable them to achieve subspecialist learning outcomes.

Knowledge

Didactic teaching, self-study, writing comments and engaging in discussion in the virtual learning environment, watching videos and animations and checking own learning through online quizzes, clinical conferences and mortality/morbidity seminars.

Clinical skills
Learning through active observation and emulation, practice, and repeat the 'observe/emulate/practice' cycle until the trainee has developed the clinical skill well enough to meet course learning outcomes.

Technical skills
Observe and practise each skill repeatedly until course learning outcomes are met.

ASSESSMENT AND FEEDBACK
Trainees show that they are working towards the attainment of course learning outcomes. In the formative online course this will be through participation in quizzes. Face to face assessment will be through case-based discussion with mentors and developing further through regular guidance and appraisal of their progress. Trainees finally demonstrate that they have achieved course learning outcomes by passing the summative online/written test of knowledge and OSATS and DOPS for procedural skills.

d) Trauma and socket Management post eye removal procedures – OPH 970 (12 credit units)

Overall Objectives

The objectives of the course are to enable trainees to:

- evaluate the options for treatment of traumatic injury to the eye and ocular adnexa
- describe the epidemiology, presentation, examination and therapeutic options for retinoblastoma, ocular surface tumours, and orbital tumours
- competently undertake exenteration and socket repair

Trainees are expected to be able to:

Knowledge
- Describe the anatomy of eyeball, orbit and ocular adnexa
- Describe the anatomy of the bony orbit, paranasal sinuses and nasal cavity
- Describe the anatomy of the lacrimal drainage system.

Course topics and intended learning outcomes

At the end of the course, trainees are expected to be able to:

Epidemiology

- Outline the prevalence of ocular injuries and ocular tumours with particular reference to retinoblastoma, ocular surface tumours and orbital tumours
- Describe the epidemiology of these conditions

The Orbit

- Describe the Anatomy of the orbit
- Describe the assessment, investigation and management options for trauma affecting the orbit
- Describe the assessment, investigation and management options for retinoblastoma and other intraocular tumours
- Describe the assessment, investigation and management options for ocular surface and orbital tumours

Socket

- Describe the various approaches to orbitotomy
- Describe the various approaches to canthotomy and canthoplasty
- Describe the various approaches to socket reconstruction

Orbital exenteration

- Detail the indications, pre-operative assessment and preparation required for exenteration
- Describe the surgical principles of exenteration
- Diagnose and manage the common post-operative complications of exenteration
- Demonstrate competent performance of exenteration surgery (including eyelid sparing surgery)
- Demonstrate simple peri-ocular flap rotations to cover large defects following exenteration
- Describe the aesthetic options for exenteration

Socket repair

- Detail the indications, pre-operative assessment and preparation required for socket repair
- Describe the surgical principles of socket repair
- Diagnose and manage the common post-operative complications of socket repair
- Describe the anaesthetic options for socket repair
- Demonstrate competent performance of socket repair
- Describe the cosmetic options following socket repair including prosthesis

TEACHING AND LEARNING

How trainees develop the knowledge and skills to enable them to achieve subspecialist learning outcomes.

Knowledge

Didactic teaching, self-study, writing comments and engaging in discussion in the virtual learning environment, watching videos and animations and checking own learning through online quizzes, clinical conferences and mortality/morbidity seminars.

Clinical skills
Learning through active observation and emulation, practice, and repeat the 'observe/emulate/practice' cycle until the trainee has developed the clinical skill well enough to meet course learning outcomes.

Technical skills
Observe and practise each skill repeatedly until course learning outcomes are met.

ASSESSMENT AND FEEDBACK
Trainees show that they are working towards the attainment of course learning outcomes, in the online course in oculoplastics through participation in quizzes and develop further based on regular guidance and appraisal of their progress. Trainees finally demonstrate that they have achieved course learning outcomes.

e) Blepharoptosis – OPH 971 (16 units)

Overall Objectives

The objectives of the course (online and hands-on components) are to enable trainees to:

- diagnose and assess the patient with blepharoptosis
- evaluate the options for treatment of blepharoptosis
- demonstrate competent assessment, performance and management of blepharoptosis corrective surgery including use of various synthetic and non-synthetic materials

Knowledge

- Describe in detail the anatomy of eyelid and ocular adnexa
- Explain the different types of blepharoptosis

Clinical skills

- Take detailed and relevant patients' history

Technical skills

- Examine in detail the eyelid position, margin alignment
- Suture using micro-sutures to the tarsal plate and skin

COURSE TOPICS AND INTENDED LEARNING OUTCOMES

At the end of the course, participants are expected to be able to:

Epidemiology

- Outline the prevalence of blepharoptosis
- Describe the epidemiology blepharoptosis
- Enumerate the risk factors for developing acquired blepharoptosis and how to prevent them.
- Describe associations with complex congenital ptosis

The Eyelid

- Describe the anatomy and physiology of the eyelid

- Describe the protective eye mechanisms (PEM) that determine full correction/undercorrection in blepharoptosis
- Describe the relationship between the eyelids, midface, and brow to blepharoptosis
- Describe and recognise eyelid abnormalities
- Discriminate between upper and lower eyelid position with particular reference to dermatochalasis, retraction, entropion, ectropion, and eyelid tumours.

Blepharoptosis surgery

- Detail the indications, pre-operative assessment and preparation required for surgical correction of blepharoptosis
- Describe the surgical principles behind blepharoptosis surgical correction
- Diagnose and manage the common post-operative complications of blepharoptosis surgery
- Describe the anaesthetic options for blepharoptosis surgery
- Demonstrate competent performance of levator resection and brow suspension surgeries
- Describe the cosmetic options following blepharoptosis surgery

Grafts

- Describe the types and indications for graft use in ptosis correction
- Enumerate potential sources of graft material
- Explain the preparation of graft donor
- Explain the post-operative complications and their management

TEACHING AND LEARNING

How trainees develop the knowledge and skills to enable them to achieve subspecialist learning outcomes.

Knowledge

Didactic teaching, self-study, writing comments and engaging in discussion in the virtual learning environment, watching videos and animations and checking own learning through online quizzes, clinical conferences and mortality/morbidity seminars.

Clinical skills

Learning through active observation and emulation, practice, and repeat the 'observe/emulate/practice' cycle until the trainee has developed the clinical skill well enough to meet course learning outcomes.

Technical skills

Observe and practise each skill repeatedly until course learning outcomes are met.

f) Imaging in Ophthalmic plastic surgery – OPH 972 (8 credit units)

Overall objective

To describe the indications for and to interpret CT and MRI scans (e.g. orbital trauma, orbital lesions and tumors)

Objectives

Trainees are required to be knowledgeable about the indications for, use of, and limitations of radiological investigations that may be recommended for patients with ophthalmic plastic surgical disorders. Regular seminars and workshops in radio- imaging in collaboration with radiologists are required for a more profound understanding of the indications for, and techniques of, magnetic resonance imaging (MRI), and computed tomography (CT) scanning as they apply to the practice of ophthalmic plastic surgery.

Knowledge

Describe the indications for obtaining imaging studies, including computerized tomography (CT) scanning, magnetic resonance imaging (MRI), MR and CT angiography, orbital ultrasonography.

Describe the indications for and interpret basic echography (ultrasound) of the eye and orbits: A-scan, B-scan and duplex Doppler ultrasonography

Clinical skills

Perform detailed clinical examination for ophthalmic plastic surgical patients needing imaging studies.

Technical skills

Interpret radiologic images in orbital diseases (eg, interpretation of orbital imaging for orbital pseudotumor and tumors, thyroid eye disease, intracranial imaging modalities and strategies for tumors, aneurysms, infection, inflammation, ischemia), and appropriately discuss localization of clinico-radiological features with the radiologist in order to obtain the best study and interpretation of the results

OPH 998 Seminars (6 credit nits)

OPH 999 Thesis/Dissertation: (12 credit units)

CHAPTER 5

CERTIFYING EXAMINATION OF THE COLLEGE

5.1 Application for College Certifying Examinations

The Fellowship Examinations are held twice a year in March/April/May and September/October/November. A call for application is published in at least one of the National Daily newspapers and College website in December and June for the March/May and September/November examinations respectively.

Candidates are advised to watch out for and comply with the examination application requirements as outlined in these advertisements.

5.2 Assessment methods for MD Degree

These will include practical exercises, assignments and tests, Formative assessment, Summative assessment, Thesis presentation and thesis defence examination will be administered at the end of the course.

This thesis defence will take place at least 6 months before the Part II Final for FMCOph.

5.3 Teaching Methods: This will include didactic lectures, seminars, case studies, assignments and practical sessions.

5.4 Resources: Computers and internet access, Journal articles, Research materials from the ICO and American Academy of Ophthalmology.

5.5 Part II Fellowship Examination

The Part II Examinations is designed to complete the assessment of professional competence in ophthalmology before the award of the Fellowship in Ophthalmology (FMCOph). Candidates are eligible to write the examination at least by the 36th month of senior residency training.

5.5.1 Dissertation Proposal Preparation and approval: The dissertation proposal should have at least 2 supervisors one of whom must be a Fellow of the Faculty and agree to critically supervise the design, collection of data, analysis of data and general write up of the dissertation. Submit written attestations by the supervisors indicating their willingness to supervise the project for the dissertation

The criteria to qualify as a supervisor is as the prevailing approval by the Faculty and the College. The proposal should be considered in a departmental seminar and approved by the department before sending to the ethical review board.

Approval from the relevant institutional review board or ethical approval for the study should be obtained before registration of the dissertation proposal with the College.

Exams shall be done not earlier than 12 months after proposal for dissertation has been approved by the College.

The format for the Proposal and the Dissertation book is as in the main Faculty Curriculum and as approved by the College.

5.5.2 Components of the Part II Fellowship Examinations

The Part II Fellowship Examinations shall consist of:

Format of the examination

a) A dissertation addressing a problem or topic relating to ophthalmic plastic surgery to be submitted for an oral defence of the dissertation before an examination panel consisting of at least two eligible examiners

b) An oral examination (VIVA VOCE) consisting of two sections:

i. General Ophthalmology where the candidate is expected to meet a set of at least two examiners to answer THREE questions in general ophthalmology over a 30-minute period.

ii. Ophthalmic plastic surgery: where the candidate is expected to meet a set of at least two sub-specialists to answer SIX questions in the sub specialty over a 60-minute period

The Standard setting method for Orals - Borderline group method should be used to obtain the pass score.

5.5.3 Examination Results

To pass the examination, a candidate must:

a) Have his/her dissertation accepted at *P* or *P+* level
b) Pass the Clinicals which is the combined Viva Voce and the Objective Structured Practical Examination (OSPE)
c) Conditions for Provisional Pass, Referral in Clinicals, Referral in Dissertation and Fail

i. A candidate whose dissertation needs some significant corrections, i.e. *P-* level pass, but who had passed the combined Viva Voce and OSPE shall have a Provisional Pass.
ii. The corrections of the dissertation shall be made within three months and must be satisfactorily vetted by one of the examiners before it can be accepted. Once accepted, the provisional pass is converted to a full pass by the College.
iii. A candidate who has his/her dissertation accepted as *P* or *P+* level but fails in the combined Viva Voce and OSPE shall be referred (Clinicals) in the Viva Voce and OSPE only.
iv. A candidate who scores a P-level pass in the Dissertation and fails the combined aggregate of the Viva Voce and Practical shall be deemed referred in Clinicals with Provisional Pass in Dissertation.
v. The candidate would be required to make the corrections in the book within 3 months after the exams and if satisfactory to the examiners, will be expected to repeat only the combined Viva Voce and OSPE. However, if the dissertation remains unacceptable to

the examiners, the candidate would be required to sit both the dissertation and the combined Viva Voce and OSPE.

vi. A candidate, having passed the combined Viva Voce and OSPE but whose dissertation needs major restructuring, i.e. *P-1* level, shall be referred in the Dissertation only.

vii. A candidate whose dissertation needs major restructuring, i.e. *P-1* level and also failed the combined Viva Voce and OSPE is deemed to have failed the entire exam.

5.5.4 Publication of the Results

The results of the Fellowship examinations in Ophthalmology are published by the College Registrar on approval by the Senate

5.5.5 Correspondence

The National Postgraduate Medical College of Nigeria or the Faculty of Ophthalmology does not normally enter into correspondence or discussion in respect of the details of a candidate's performance in the examination.

5.6 Designation of Fellowship in Ophthalmic plastic surgery

The designation of a fellowship in Ophthalmic plastic surgery of the College shall be: FMCOph (Ophthalmic plastic surgery)?

CHAPTER 6

ACCREDITATION OF TRAINING INSTITUTIONS GUIDELINES

6.1 Training Institution eligibility criteria

a. Shall meet the requirements of the Faculty of Ophthalmology of NPMCN training requirements in General ophthalmology

b. Facility and equipment: inclusive of in-hospital radiology, basic biochemistry, haematology, microbiology and ophthalmic histology services with the requisite manpower

c. Accredited Comprehensive ophthalmology services

d. Manpower: at least one ophthalmic plastic surgeon with a minimum of 5 years post fellowship OR minimum 10 years practising ophthalmic plastic surgery

e. Case load:

i. Minimum surgery

ii. Clinic load of a minimum number of cases per week/month per trainee

6.2 UNIFORM CRITERIA/GUIDE FOR ACCREDITATION

The Senate of National Postgraduate Medical College of Nigeria at its meeting of 3rd December 2015 approved Uniform Criteria /Guidelines for Accreditation of Training Institutions as follows:

BASIS

The College recognizes that the training of specialist requires

1. Qualified and experienced personnel
2. Appropriate infrastructure
3. A well-structured training programme that recognizes modern trends of training and assessments
4. Opportunities and evidence of acquisition of skills
5. Access to up-to-date information
6. Regular feedback and evaluation from trainers and trainees

PHILOSOPHY: The process must be:-

- Fair

Done when the institution is ready

- Transparent

What is being assessed and persons assessing is known to all

- Objective

Minimal bias in the choice of the accreditors – usually not from the institution of affiliates

- Instructive

Feedback given to heads of Institutions

- Monitored

Reaccreditation done after a clearly defined period – 5 years (Full), 2 years (Partial)

DEFINITIONS AND WEIGHTING

MANDATORY REQUIREMENT.

v) **Qualified personnel**

The College approved that the basic qualification for training is the Fellowship of College (by examination or election but not honorary). The individual must have had at least 5 years' experience working in a training institution and must be financially up-to-date. It is also expedient that departments in Institutions should have a good mix of the College training in the country so that trainees will have the maximum benefits of current rules and regulations governing their training. Weighting should be 15%of total accreditation score

vi)**Appropriate Infrastructure**

This is a major pillar without which training cannot take place. What is appropriate will be defined by faculties. But facilities must be well constructed and maintained with the basic amenities

a. light
b. water
c. waste disposal

Available and with adequate backup. These includes
a. wards
b. out patients clinic
c. laboratories
d. theaters
e. radiological suites, etc

The weighting shall be a minimum of 10% of total accreditation scores. This can be sub-divided into core infrastructure (5%) and support infrastructure (5%)

vii) Equipment

The College noted that equipment is an essential component in the acquisition of skills and competence. The minimum equipment needs will be determined by faculties and the procedure/log book will be necessary in assessing this component. The weighting shall be a minimum of 20% of total accreditation score.

viii) **Structured training programme**:

The College has approved curricula and required competencies that trainees are expected to acquire. It is expected that institutions have a well-publicized (every trainee should have it in writing) structured programme which faithfully implemented and evaluated by a departmental residency committee. This programme must be seen by the accreditation team. Weighting should be 15% of total accreditation score.

5. **Opportunities/ Evidence of skill acquisition**

In recognition that our profession is an apprenticeship, all trainees must be provided with the opportunities of acquiring the necessary skills to be competent as a specialist. Records of such must be seen. This includes a procedure registrar, theater list and log book. Weighting should be 15% of total accreditation score.

DESIRABLE REQUIREMENT

6. **Access to new information**

This is a crucial element in making our trainees lifelong learners. It is therefore expected that there should be institutional support for trainees to attended updates, revisions, conference and seminars. It is also expedient that trainees acquire the skills at making presentation at departmental meetings and other scientific of professional. The library and the internet are veritable sources of information and it is expected that training institutions have such facilities accessible to the trainees. Evidence of all these must be seen. Weighting should be 15% of total accreditation score

7. **Regular feedback and evaluation**:

Evaluation is an important aspect of training. It is recognize that assessment can be formative /continues or summative. The College traditionally have carried out summative examinations at the end of each part. However, training requires regular feedback from trainers to trainees and vice versa. Mentorship builds on the concept of regular evaluation, feedback, appropriate guidance and counseling of trainees. A good training programme must have these inbuilt and faithfully carried out. Weighting should be 10% of total accreditation score.

Total score is 100% or 100 points

TABLE 3: ACCREDITATION TABLE OF REQUIREMENTS AND GRADING

No	**Requirement**	**Inadequate 0**	**Partially Adequate 7.5**	**Full Adequate 15**
1.	Qualified and experienced personnel a. Prescribed number (full time/Part time b. prescribed trainers: trainees ratio c. support personnel **(15 Points)**			
2.	Appropriate infrastructure a. basic: water, light, sewage etc b. core departments presents c. support departments presents **(10 Points)**			
3	Equipment a. core equipment b. support equipment **(20 Points)**			

4	Well-structured training programme a. seen by all b. content (lectures, tutorial , bedside sessions) **(15 Points)**			
5	Opportunities/ Evidence of skill acquisition a. Procedure Register b. Theater List c. Log Book **(15 Points)**			
6	Access to new information(15 point) a. library b. Internet **(15 Points)**			
7	Regular feedback and evaluation **(10 Point)**			
8	**TOTAL**			

< 0=49 (Scores less than 50%) - Accreditation Denied

≥50-74 (Scores equals to 50% and Less than 75%) - Partial Accreditation for 2 years

>75-100 (Scores equals or greater than 75% and above - Full Accreditation for 5 years

2. **Effectiveness/function/role of visiting Consultants**

i. A visiting Consultant should have a minimum of 5 years post Fellowship experience.
ii. No training should take place in any institution without permanent consultants on ground.
iii. There must be documented evidence of activities of a visiting Consultant that residents are being supervised by him/her.
iv. For the purpose of accreditation the full time equivalent should be as follows:

2 visiting Consultants to 1 Full time Consultant.

3**. Period of Accreditation**

1. Partial accreditation should last for 2 years. Within the period of the Partial accreditation, one monitoring visit should be made to the institution.

2. Full accreditation should last for 5 years. Within the period of the Full accreditation, two monitoring visits should be made to the institution.

4. **Effective Date of Accreditation**

The effective date for existing accreditation should be with effect from the date of visitation, irrespective of the time the Senate approves the report.

The effective date for new accreditation should be from the date of Senate approval.

5**. Trainers/trainee ratio**

The ratio of Residents to consultants should be minimum of 3:1 or Maximum 4:1. That is, One (1) Senior Registrar and Two (2) Registrars OR Two (2) Senior Registrars and Two (2) Registrars to one Consultant.

6. The number of Consultants is not the sole determinant for accreditation status, either as partial or full.

Every other criteria are taken into account to arrive at the verdict of either Partial or Full accreditation.

1. For any re-accreditation visit, the report of the previous accreditation visit should be made available to the current nominated panel member, to enable them to compare notes and ensure that progress is being made.

5.3 SUMMARY OF ACCREDITATION VISIT:

Should accompany the accreditation report and in formats approved by the College and the Faculty and contained in the main Faculty Curriculum