APPENDIX 1

POSTGRADUATE TRAINING PROGRAMME STRUCTURE
(ADAPTED FROM THE MASTERS TRAINING PROGRAMME STRUCTURE OF THE MALAYSIAN UNIVERSITIES CONJOINT COMMITTEE OF OPHTHALMOLOGY (MUCCO))

OBJECTIVES

The postgraduate training programme in Ophthalmology aims to produce graduates who:

1. are able to appropriately assess, diagnose and manage patients with ocular and systemic related disorders
2. can assess and detect dysfunction of vision and the visual system, and provide appropriate management for such conditions
3. are able to use current and appropriate technology in the diagnosis and management of relevant ocular conditions
4. understand their role and are able to participate in the prevention of blindness programme
5. understand their role as teachers and the importance of continuous professional development in the advancement of Ophthalmology
6. are able to participate in eye research and development activities
7. can function effectively, ethically and professionally within the profession

LEARNING OUTCOMES

Phase I (Year 1)

At the completion of this phase, trainees possess:

1. good knowledge in basic medical and surgical sciences
2. good knowledge in ocular anatomy, physiology, pathology, basic optics and ocular diseases
3. basic understanding on the optical principles of ophthalmic instruments and their applications
4. skills in taking relevant history from patients and performing a complete ophthalmic examination
5. skills in performing clinical refraction and interpret prescriptions
6. knowledge in basic ophthalmic microsurgery
7. skills in performing minor ophthalmic surgeries under supervision
8. good knowledge in basic research methodology

Phase II (Year 2 & 3)

At the completion of this phase, trainees possess:

1. in depth knowledge of ocular diseases and related systemic conditions
2. enhanced skills in eliciting history and performing a comprehensive examination to arrive at appropriate differential diagnosis
3. the ability to decide on and interpret relevant investigations and manage most cases with minimum supervision
4. the ability to perform common surgical procedures such as cataract surgery with supervision
5. knowledge and skills in the assessment of low vision and its management
6. the ability to apply research methods in the conduct of their dissertation project

Phase III (Year 4)

At the completion of this phase, trainees possess:

1. the ability to manage common and acute ophthalmic conditions independently
2. the ability to perform common surgical procedures with minimal or no supervision
3. an evidence-based approach to clinical decision-making and problem-solving, through an ability to identify, critically analyze and interpret evidence
4. the ability to communicate effectively with patients, their relatives and professional colleagues
5. knowledge on prevention of blindness programme planning and experience on related activities
6. knowledge and skills to supervise junior trainees
7. the ability to conduct eye research and research in related sciences
8. good insight and the ability to recognize own limitations and seek appropriate consultation

PROGRAMME STRUCTURE

Year	Phase	Curriculum	Assessment
1	1	Ophthalmology related to basic medical sciences Basic ocular sciences Optics & refraction Introduction to clinical ophthalmology	Part I
2 3	2	Clinical ophthalmology Ophthalmology related to general medicine & neurology	Part II
4	3	Advanced clinical ophthalmology	Part III

The course extends over a minimum period of 4 years and maximum period of 7 years.

SYLLABUS

PHASE I

BASIC MEDICAL SCIENCES (in relation to Ophthalmology)

Anatomy

General nervous system

Central nervous system

Detailed anatomy of the eye, orbit and adnexae and the visual pathways

Head and neck anatomy

The respiratory system and cardiovascular systems

Histology

Embryology

Physiology

General physiology (in relation to Ophthalmology)

- Cardiovascular system
- Respiratory system
- Haematological system
- Nervous system
- Endocrinology
- Renal system
- Homeostasis
- Nutrition

Pathology

General principles of pathology including

- Inflammation
- Disturbance of growth
- Healing and repair
- Immunological mechanisms and hypersensitivity reactions
- Vascular pathology
- Degenerative disorders and aging
- Shock & trauma
- Neoplasia and the effects of treatment
- Common tissue stains

Pharmacology

General pharmacological principles

- Mode of action of drugs on receptors
- Drug toxicity
- Absorption, distribution, metabolism and excretion of drugs

Molecular & cell biology

Cell structures and their biochemical functions

Normal cell functions and interactions

Connective tissue and extracellular matrix

Genetics

Principles of genetics

Modes of inheritance

Principle of gene therapy

Microbiology and immunology

Principles of microbial pathogenesis

Principles of sterilisation, disinfection and asepsis

Principles of antimicrobials

Principles of immunology

BASIC OCULAR SCIENCES

Anatomy of visual and ocular system

Physiology of visual and ocular system

Introduction to ocular pathology

Optics & refraction

Physical optics

Geometric optics

Clinical optics

Clinical refraction

Instruments

PHASE II SYLLABUS

Clinical history taking and examination

- Ocular and systemic

Clinical ophthalmology

- External eye diseases & orbit
- Diseases of the uvea
- Diseases of the lens
- Diseases of the retina
- Diseases of ocular motility
- Glaucoma
- Preventive ophthalmology
- Investigations for ophthalmic diseases
- Therapeutics

Paediatric ophthalmology

- The diagnosis and management of common paediatric ophthalmic conditions

Neuro-ophthalmology

- Disorders of the visual pathways
- Neuro-ophthalmic disorders of ocular motility

Ophthalmology in relation to medicine

- Common neurological conditions affecting the eye
- Endocrinology
- Principles of resuscitation

Ophthalmic surgery

- All surgery related to ophthalmology