DEPARTMENT OF MEDICAL EDUCATION
ACADEMIC AFFAIRS CENTRE

OPHTHALMOLOGY
A Guide to the Four Year Specialty Training Program

DUBAI RESIDENCY TRAINING PROGRAM

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## Contents

- Introduction .................................................................................................................. 1
- Program Administrators .................................................................................................. 2
- Objectives of the Program ............................................................................................... 3
- Program Structure ............................................................................................................. 4
- Curriculum ...................................................................................................................... 5
- Log Book & Required Surgical Procedures ...................................................................... 7
- Clinical Research ............................................................................................................ 8
- Evaluation ...................................................................................................................... 10
- The Certificate ................................................................................................................ 10
- References & Glossary ...................................................................................................... 11
The DHA Ophthalmology Department Specialist Training Program offers a four year program that blends clinical training, academic activities, and research opportunities.

This handbook provides a general description of the program, the structure of the residency training and the standards and expectations of resident performance.

Our training program is intended to produce competent general ophthalmologists, who understand the importance of research.

The criteria outlined in this manual are to ensure that each resident attains the objectives as they rotate through the various Dubai Health Authority teaching hospitals. We emphasize that these are minimal standards and that we encourage all residents to set their personal goals higher.

The mission of the program is to train specialists in ophthalmology who are capable of independent practice. An ophthalmologist is a specialist trained in the diagnosis and treatment of a broad range of ocular diseases.

Goals & Objectives

- Train ethical, comprehensive and compassionate ophthalmologists.
- Provide residents with the fundamental scientific background in ophthalmology to prepare them to become lifelong learners, educators & researchers.
- Provide residents with enough didactic instruction and clinical experience to obtain Arab Board of ophthalmology.
Program Administrators

Our Program Administrators in partnership with an expert team of supervisors & faculty steer the Ophthalmology Program towards the zenith of quality Residency training education offered in Dubai.

Under their expert care, your training journey is guaranteed to be an enlightening experience.

Dr. Patricio Manuel Aduriz Lorenzo
PROGRAM DIRECTOR
Consultant, Dubai Hospital

Dr. Hachemi Nezzar
PROGRAM CO-DIRECTOR
Consultant, Dubai Hospital
Objectives of the Program

Residents are expected to develop competencies in the following 6 core criteria:

**Patient Care & Procedural Skills**
- Residents must be able to:
  - Provide patient care that is compassionate, appropriate & effective for treatment of health problems & promotion of health.
  - Competently perform all medical, diagnostic & surgical procedures considered essential for the area of practice.
- Demonstrate competence in patient care, including:
  - Evaluating and assessing pre-operative ophthalmic and general medical indications for surgery and surgical risks and benefits;
  - Managing systemic and ocular complications that may be associated with surgery and anesthesia;
  - Obtaining informed consent;
  - Providing acute and long-term postoperative care.
  - Intra-operative skills;
  - Using local and general anesthetics.

**Medical Knowledge**
- Residents must demonstrate knowledge of established and evolving biomedical, clinical, and epidemiological sciences, as well as the application of this knowledge to patient care.
- Residents must demonstrate competence in their knowledge of the basic and clinical sciences specific to ophthalmology, with all of its subspecialty categories.

**Practice-based Learning and Improvement**
- Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and lifelong learning.
- residents are expected to develop skills and habits to be able to meet the following goals:
  - Identify strengths, deficiencies and limits in one’s knowledge and expertise;
  - Set learning and improvement goals;
  - Identify and perform appropriate learning activities;
  - Systematically analyze practice using quality improvement methods & implement changes for practice improvement;
  - Incorporate formative evaluation feedback into daily practice;
  - Locate, appraise & assimilate evidence from scientific studies related to their patients’ health problems;
  - Use information technology to optimize learning; and,
  - Participate in the education of patients, families, students, residents and other health professionals.

**Interpersonal & Communication Skills**
- residents are expected to:
  - Demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.
  - Communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;
  - Communicate effectively with physicians, other health professionals, and health related agencies;
  - Work effectively as a member or leader of a health care team or other professional group;
  - Maintain comprehensive, timely, and legible medical records, if applicable.

**Professionalism**
- residents are expected to demonstrate:
  - Commitment to carrying out professional responsibilities and an adherence to ethical principles.
  - Compassion, integrity, and respect for others;
  - Responsiveness to patient needs that supersedes self-interest;
  - Respect for patient privacy and autonomy; accountability to patients, society and the profession;
  - Sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

**Systems-based Practice**
- residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.
- residents are expected to:
  - Work effectively in various health care delivery settings and systems relevant to their clinical specialty;
  - Coordinate patient care within the health care system relevant to their clinical specialty;
  - Incorporate considerations of cost awareness & risk-benefit analysis in patient and/or population based care as appropriate;
  - Advocate for quality patient care and optimal patient care systems;
  - Work in inter-professional teams to enhance patient safety and improve patient care quality;
  - Participate in identifying system errors and implementing potential systems solutions.
Program Structure

During the four years of residency, residents assume increasing responsibility for patient care and education. Beginning residents are closely supervised, and then given increasing autonomy as they demonstrate proficiency and understanding. Residents prepare case presentations, organize journal clubs, and assist in teaching medical students rotating through ophthalmology. In addition, senior residents, with faculty supervision, are expected to supervise and teach junior residents. Faculties are assigned and available for consultation with the residents on all rotations.

Core Rotations
First Year Resident: PG1
- The first year resident rotates through the Ophthalmology clinics and also participates in a continuity care clinic.
- The resident performs complete ocular examinations in the outpatient facilities, becoming proficient in gonioscopy, indirect ophthalmoscopy, tonometry, biomicroscopy, refraction, and physiologic testing.
- The resident gains extensive experience in evaluating walk-in and emergency patients on a daily basis. The earliest encounters with ocular trauma are during the first year.
- The resident begins assisting at surgery during this year, and might perform minor surgical procedures.

Second Year Resident: PG2
In the year the resident rotates through the glaucoma, cornea & external disease, pediatric, orbit and oculoplastics & retina rotations at the Ophthalmology clinics. The resident is expected to build on his/her knowledge and experience from the first year and participate in minor surgeries as well as part of the intraocular surgeries.

Third Year Resident: PG3
- Residents are expected to manage the clinic semi-independently as well as most simple intraocular / extraocular trauma.
- Based on the problem seen in the clinic or the OR the resident’s experience, and attending preference, there will be successive levels of autonomy. The resident will be involved with the pre-operative and post-operative care of each surgery performed.
- They also assist in supervising the junior residents.
- All residents participate in wet and dry labs, receiving instruction on surgical techniques and suturing.
- The wet lab will be equipped with a state-of-the-art microscope and phacoemulsification unit.

Fourth Year Resident: PG4
- Residents in this year will work independently in most simple and some more complicated cases in the Clinic and the OR.
- During six months of this year they will be functioning as Chief Resident with Educational & Administrative responsibilities.
- At the conclusion of the fourth year, the residents are expected to be able to enter practice with confidence.
- All residents participate in wet and dry labs, receiving instruction on surgical techniques and suturing.
- The wet lab will be equipped with a state-of-the-art microscope and phacoemulsification unit.

Scholarly Activity
- Participation in grand rounds, journal clubs, research projects, scientific presentations and publications.
- Critical appraisal and integration of medical information.
- Developing an understanding of and the ability to apply the principle of adult learning.

Managerial Activity
During the last 6 months of PG4 the resident will be functioning as Chief Resident with educational and administrative responsibilities, where the Chief resident will be responsible for:
- Collecting vacation requests, screening vacation requests for appropriateness, and passing the information on to the program coordinator. The requests will be approved by the Program Director.
- Scheduling duties for the first on-call and back-up (second) on-call, and providing the schedule to the program coordinator. The schedule must comply with duty hour standards. The schedule will be approved by the Program Director.
- Organizing content of weekly teaching rounds, creating schedule of presenting residents & ensuring appropriate program content.
- Preparing the monthly resident assignments based on the core rotations, and providing the schedule to the program coordinator. Reassigning residents as necessary, i.e. when a resident is off due to illness, or when a clinic is cancelled due to faculty illness, and providing the updated information to the program coordinator. He/she points out deficiencies or problem areas to the Program Director.
- Assures that attendance is taken at the regularly scheduled lectures. If he/she is unable to be present, he/she assigns this task to another resident. The Chief Resident is responsible for providing the attendance records to the program coordinator.
- Keeping track of the agenda at semi-annual resident/faculty meetings.
- Attending the clinical faculty meetings to provide input about the residency program.

Vacation and Conference Leave
Each year will include four weeks of vacation and one week of conference leave that may be taken at any time in the program with the approval of the Program Director and the supervisor of the affected rotation. The absent dates from any rotation should not exceed 25% of total rotation time.

Absences from training
Residents are statutorily entitled to short breaks as per government announcements. In addition they are entitled to absence for special leave, compassionate leave, sick leave and maternity leave. The totality of leave for these purposes should not exceed ten weeks during the four years of training. If this period is exceeded, additional training will be required and the date of Certification will be postponed.
Curriculum

Cornea and Anterior Segment
The resident will become proficient in the diagnosis and management of:

- Congenital abnormalities of the anterior segment
- Infections and inflammations of the lid, conjunctiva, cornea, and sclera (including bacterial and viral conjunctivitis, chlamydial disease, epithelial keratitis, bacterial and fungal keratitis)
- Dystrophies and degenerations of the cornea, including the corneal epithelium, Bowman’s layer, stroma, Descemet’s membrane and endothelium
- Anterior segment trauma, including primary repair and secondary reconstruction (including injuries caused by temperature and radiation, chemical injuries, concussion and contusion injuries, penetrating and perforating injuries, surgical trauma and recurrent erosion syndrome)
- Abnormalities of the crystalline lens, ocular surface and tear film
- Surgery of the Cornea and Anterior Segment (including eye banking technology, indications for penetrating & lamellar keratoplasty, recognizing corneal transplant rejection and how to manage this problem)
- Keratorefractive Surgery (including indications and contraindications for refractive surgery, different laser refractive procedures including keratoplasty and lasik)

Glaucoma
- The resident will become proficient in diagnosing glaucoma and be able to identify progression.
- The resident will become proficient in the medical, laser and surgical management of:
  - Primary open angle glaucoma
  - Secondary open angle glaucoma
  - Primary closed angle glaucoma
  - Secondary closed angle glaucoma
  - Congenital glaucoma
- Post-operative management after glaucoma surgical procedures, including routine and common complications
- Thorough awareness of indications, contraindications, efficacy and pharmacology of medications used in the management of glaucoma, including modulators of wound healing, such as Mitomycin and 5-FU.
- Residents will have a thorough understanding of visual field testing and interpretation
- Residents should be able to perform and interpret a full optic nerve assessment including fundoscopic examination with accurate drawing of the disc, identification of glaucomatous characteristics of optic nerve damage, and an awareness of digital optic nerve imaging technologies and their interpretation
- Residents should be proficient in gonioscopy and grading of the anterior chamber angle in both primary and secondary angle closure glaucoma.
- Residents will be able to perform ultrasonic pachymetry and have a thorough understanding of central corneal thickness with regards to risk for glaucoma and effect on intraocular pressure readings.

Neuro-ophthalmology
- The resident will become proficient in the diagnosis and management of:
  - Congenital, Inflammatory, Infectious & Neoplastic conditions affecting the optic nerve head and retrobulbar visual pathways
  - Systemic conditions affecting the optic nerve head and the retrobulbar visual pathways
  - Trauma to the optic nerve head and the retrobulbar visual pathway
  - Degenerative and aging changes of the optic nerve head and the retrobulbar visual pathways
  - Disorders of pupillary function and accommodation
  - Supranuclear, internuclear, nuclear and infranuclear ocular motor disorders
  - Disorders of eyelid position and movement
  - Neuro-ophthalmic emergencies
- In addition, the residents will have:
  - Good knowledge of the anatomic structures relevant to neuro-ophthalmology (including the skull and orbit, brain, vascular system, and cranial nerves) in order to localize lesion
  - Thorough understanding of the physiological basis of and indications for each of the various modes of visual field testing
  - Familiarity with the indications for and interpretation of neuroimaging studies

Ocular Genetics
- Resident will learn to recognize most common inherited eye disorders, not limited to retinitis pigmentosa, retinoblastoma, cataract, albinism neurofibromatosis, Marfan’s Syndrome, macular dystrophies, glaucoma, Lebers Heredity Optic Neuropathy (LHON).
- The resident will learn about new therapeutic modalities for Retinoblastoma.
Oculoplastics & Orbit
- The resident will become proficient in the diagnosis and management of:
  - Congenital abnormalities of the lid, orbit and lacrimal system
  - Acquired abnormalities of the lid, orbit, and lacrimal system
  - Primary, secondary, and metastatic tumors of the lid, conjunctiva, orbit and lacrimal system
  - Inflammatory and infectious conditions of the lid, orbit and lacrimal system
  - Systemic conditions affecting the lid, orbit and lacrimal system, including dysthyroid states.
- Residents will have a thorough understanding of the orbital imaging modalities, including conventional A and B scan ultrasound as well as ultrasound biomicroscopy, dacryocystography, computerized tomography, magnetic resonance imaging, and nuclear scans, and their indications.

Pediatrics and Strabismus
The resident will become proficient to the level of a general ophthalmologist in the diagnosis and management of:
- Amblyopia and assessment of visual acuity in infants and children.
- Abnormalities of eye movement, ocular alignment and binocular vision.
- Ocular genetic disorders.
- Manifestations of systemic disease in the pediatric population.
- Vitreo-retinal, oculoplastic, glaucomatous, neuro-ophthalmic, corneal and uveitic diseases in children
- Ocular and periocular trauma in the pediatric population.
- Pediatric neoplasms in the eye and periorbital structures.
- Inflammatory and infectious conditions of the ocular structures in the pediatric population.
- Refractive errors in children and infants.
- The use of electroretinography (ERG) and visual evoked potentials (VEP).
- The ability to examine the eye of a premature infant including retinopathy of prematurity.
- Ophthalmic manifestations of child abuse and understanding the reporting obligation of the ophthalmologist.
- Pediatric ocular trauma.

Retina
- The resident will become proficient in the diagnosis and management of:
  - Congenital abnormalities of the retina and vitreous, including dystrophies.
  - Inflammations & infections of retina, vitreous and choroid in the immune-competent and immune-suppressed individual.
  - Neoplasms of the retina, vitreous and choroid.
  - The retinal manifestations of the systemic phakomatoses.
  - Posterior segment trauma, including intra—ocular foreign bodies.
  - Retinal manifestations of systemic disease, including diabetes mellitus and hypertension.
  - Retinal detachment, including rhegmatogenous, exudative and tractional.
  - Age related changes in the retina, vitreous and choroid.
- The resident will have a thorough understanding of the physiological basis of and indications for intravenous fluorescein angiography, ocular coherent tomography, ophthalmic electrophysiological testing and ophthalmic ultrasound.

Uveitis and Oncology
The resident will become proficient in the diagnosis and management of:
- Intraocular tumors, primary, secondary, and metastatic.
- Orbital and periorbital tumors, primary, secondary and metastatic.
- Post treatment complications including those related to the treatment of both ocular and non-ocular tumors.
- Inflammations of the uveal tract.
- Knowledge and participation in clinical trials and data management.

Refraction and Optics
The resident will become familiar & proficient in
- The refractive management of the ametropic person.
- Fitting contact lenses & management of patients wearing contact lens and contact lens related problems.
- Incisional & photo-ablative refractive surgery, including indications, procedures, and management of the postoperative patients and complications.
- Optical and non-optical management of the visually impaired patient.
- The understanding of the optical principles behind the instrumentation.
- Updated legal requirements for driving, whether it is a car, motorcycle, boat etc.
Log Book & Required Surgical Procedures

Required minimum number of procedures for graduating residents in Ophthalmology.

<table>
<thead>
<tr>
<th>Subspecialty</th>
<th>Main Surgeon</th>
<th>Assistant Surgeon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oculoplasty &amp; Orbit</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Strabismus Surgery</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Cataract Surgery</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Posterior segment Laser: (PRP or Focal laser)</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Anterior segment laser: (YAG laser capsulotomy or iridectomy)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Glaucoma Surgery</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Corneal Surgery</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Posterior Segment/ Vitro-retinal Surgery</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>145</td>
</tr>
</tbody>
</table>

Required Surgical Procedures

**Oculoplasty & Orbit:**
- Minor: Chalazion, Tarsotomy, Tarsorrhaphy, Repair of lid wound
- Major: Ptosis, reconstructive surgery

**Lacrimal surgery:**
- Minor: Probing, Irrigation, Intubation
- Major: DCR

**Strabismus Surgery:**
- Recession
- Resection

**Glaucoma Surgery:**
- Trabeculectomy
- Trabecuolotomy
- Filtering with antimetabolites
- Combined phako-trab

**Corneal Surgery:**
- Minor: Removal of corneal FB, conjunctival & amniotic membrane grafts
- Major: Keratoplasty, repair of corneal laceration

**Posterior Segment / Vitro-retinal Surgery:**
- Scleral buckling procedure
- Pars plana viterctomy.
Clinical Research

The research interests of the Department of Ophthalmology center on glaucoma, corneal diseases, retinal diseases, strabismus, amblyopia, and vision development.

Residents are required to present a research through final year thesis and for this purpose, workshops are held as follows:
- Research methodology (3 days)
- Literature review & Refworks (1 day)
- SPSS (Basic Statistics)

The goal of these workshops is to understand and able to apply the following:
- Using electronic databases such as Medline & Internet to conduct literature searches and to locate information
- Critically appraise/evaluate relevant literature, reviews and new techniques/technologies
- Use word processors, databases, spreadsheets and statistical packages to produce statistical analysis & research papers
- Conduct a literature review
- Develop an hypothesis to be tested
- Choose an appropriate research methodology and design a research study
- Write a grant application to fund a research project.
- Collect, collate and interpret data
- Apply basic statistical analysis to clinical data
- Develop an outline structure for a research paper
- Write a literature review for a research paper
- Apply the developed outline to write a research paper
- Searching the literature and data-bases purposefully
- Appraising critically relevant articles and reports
- Interpreting findings and consider their applications to other contexts
- Know how to select and draw on clinical evidence to inform practice
- Be able to define the following terms
  - Clinical significance
  - Statistically significant / insignificant
  - Variability
  - Biological variability
- Understand the following methods of and terms associated with data collection:
  - Epidemiological studies
  - Randomized controlled & crossover clinical trials
  - Randomized controlled laboratory study
- Recognize and understand the following concepts of problems associated with data:
  - Bias: confounding - measurement - sampling
  - Randomization
  - Stratification
  - Blindness (masking)
  - Relevance of sample size to the ultimate
  - Outcome of the statistical analysis
- Understand and apply the following statistical terms:
  - Probability & probability distribution models
  - Regression and correlation analysis
  - Risk – sensitivity analysis, particularly:
    - Exposure odds ratio
    - Number needed to treat
    - Significance testing
- Getting Research skills:
  - Choosing a topic for research
  - Having a detailed literature review for this purpose
  - Designing a research as per standard methodology
  - Choosing a mentor on the related field
  - Finalize the research proposal and get both scientific and ethical approval
  - The research proposal will consist of at least of Title page, Specific Aims
  - Introduction/Background and Significance
  - Objectives and Hypothesis
  - Research Design and Methodology
  - References / Bibliography
- Labor variability
- Observer variability
- Data types: categorical, continuous, qualitative, quantitative, discrete
- Observational studies
- Discrete and continuous variables
- Sample size determination
- Understand the significance & limitations of measures of central tendency:
  - Mean, median, mode
  - Variance
  - Co-variance
  - Standard deviation
  - Confidence interval
- Meta-analysis
- Absolute risk
  - Absolute risk difference
  - Absolute risk reduction
  - Attributable risk
  - Etiologic fraction
  - Relative Risk
- Conduct the research through data gathering, survey, or any standard tool
- Analyze the data
- Present the data on a thesis as per DRTP thesis guidelines, which is in line with Arab Board requirements
Each thesis must be arranged in the following order:
- Title Page (Sample A). Do not place a page number on this page.
- Dedication. Do not place a page number on this page.
- Acknowledgements and/or Preface. Do not place a page number on this page.
- Abstract (Sample B). Do not place a page number on this page.
- Table of Contents. Do not place a page number on this page.
- List of Tables, Figures, Illustrations/Maps/Slides, List of Supplemental Files such as multimedia files.
- List of abbreviations
- Text of the Thesis. All pages from the first page of text through the bibliography or Vita, if included, are numbered consecutively in Arabic numerals, beginning with Arabic numeral “1” on the first page of the thesis text.
- Introduction
- Material and Methods
- Results
- Discussion
- Limitations
- Conclusion
- Appendix or Appendices. Continue text numbering with Arabic numerals.
- References. Vancouver or Harvard standard style.
- Publications (please insert the full text of your published paper if you have any)
- Curriculum Vita. Continue text numbering with Arabic numerals.

**Thesis Formatting and Layout Requirements:**

<table>
<thead>
<tr>
<th>Page Size</th>
<th>Page size should be standard A4 size (8.50 x 11.00).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margins</td>
<td>1 inch on all sides, including page numbers.</td>
</tr>
<tr>
<td>Page Nos.</td>
<td>Should be at least 1 ½ from the bottom margins edges of the page, as appears in this document.</td>
</tr>
<tr>
<td>Spacing</td>
<td>Preliminary pages and text must be double-spaced or 1.5-spaced. Under certain conditions, quotations may be single spaced. Table of Contents and lists with lengthy entries may be single spaced with a double space between entries. References may be single spaced, with a double space between entries.</td>
</tr>
<tr>
<td>Page Alignment</td>
<td>Each new chapter/major section (i.e. Chapter 1 - 2, Appendix, Bibliography, Vita) must begin on a new page.</td>
</tr>
<tr>
<td>Pagination</td>
<td>All text page in the thesis is numbered. All text page numbers in the thesis must be centered under the text in the same location on each page and located at least one inch from the bottom of the page.</td>
</tr>
<tr>
<td>Word Processing</td>
<td>Your final thesis must be correct in spelling and punctuation and presented in a consistent, structured format. A single, legible font must be used throughout the thesis, the only exceptions being in tables, figures, graphs, appendices, foot notes, and supplemental files. The font size should be 12-pt. Accuracy and consistency is required in format of the thesis.</td>
</tr>
<tr>
<td>Tables &amp; Illustrations</td>
<td>Pages carrying illustrative material must be given page numbers appropriate to their place in the document. Illustrative material may not be inserted after the document has been numbered and given numbers such as “10a.” All tables, figures, illustrations, and other types of examples included and referenced in the text of the thesis should be numbered for identification. There should be no duplication of these numbers; i.e., no two tables should be assigned the same number. Figures may be numbered in one of two ways: consecutively throughout the document (Table 1, Table 2, Table 3, etc.) or double-numbered so that illustrations’ numbers reflect their locations in the document (Fig. 9.3 is the third figure in Chapter 9, or Fig. A2 is the second figure in Appendix A.)</td>
</tr>
<tr>
<td>Captions &amp; legends</td>
<td>To be placed on the same page with the figure, graph, table or illustration they describe. In order to fit both figure and caption on the same page, captions may be single-spaced, margins may be decreased to one inch, and figures may be reduced in size to fit. If the figures are reduced from their original size, then the page number must be added after the reduction so as not to alter its size. If there is no other way to manage the amount of material to be shown, the caption and figures should be side-by-side in continuous view. This method should only be used in the rare instance where all of the pertinent material will not fit on the same page. Figures, captions, and page numbers must be easily readable when the electronic document is viewed at 100 percent.</td>
</tr>
<tr>
<td>Copies Required</td>
<td>Residents upload a single pdf file of their thesis to Research website (e.g. thesis submission site). The electronic pdf file serves as the DHA archival copy of the thesis. As an extra measure of security, students are strongly encouraged to keep a copy of their approved thesis and to provide an additional copy to their thesis supervisor or department/program library, if applicable. By keeping an electronic backup on hand, students can easily provide scholars with a copy of the thesis during the time between submission and publication, if necessary. A paper copy of the thesis is required by the AAC.</td>
</tr>
<tr>
<td>Footnote Citations, References &amp; Bibliography</td>
<td>Each thesis must include a reference, or bibliography section. This section may be called “Bibliography” or “References”. The bibliography is the last required section of the thesis and the last section heading listed on the Table of Contents unless an optional Vita page is included. When a Vita page is included, the bibliography immediately precedes the Vita at the end of the thesis. The bibliography must indicate materials actually used, such as articles, chapters of books, websites, etc.</td>
</tr>
</tbody>
</table>
Evaluation

Format
- The ultimate responsibility for compiling the Final In-Training Evaluation of the Resident (FITER) lies with the Program Director. During each rotation of the program the resident will be supervised and evaluated by the rotation supervisor directly or by the members of the rotations teaching faculty as coordinated by the rotation supervisor. Evaluations will reflect the goals and objectives for the rotation as set out in this document. At the beginning of each rotation the goals and objectives for the rotation will be reviewed by the rotation supervisor with the resident and these will be reviewed periodically during the rotation to ensure that progress is being made towards their attainment.
- Evaluation will be ongoing throughout the rotation and be composed of several components and will include a formal written exam, oral exam as well as by direct observation of resident performance in clinical situations. This evaluation will be at the end of each rotation.
- Clinical and operative skills will be assessed by direct observation by the rotation’s teaching staff. Communication skills will be assessed by direct observation of resident interaction with patients and families as well as by examining written communications to patients and colleagues. Resident’s interpersonal skills will be assessed by observing collaborations with all members of the patient care team and their wise use of consultations with other specialties, subspecialties and non-medical disciplines. Teaching skills will be assessed by written student evaluation and by direct observation of the resident in seminars, lectures and case presentations. Attitudes will be assessed by observation and by using feedback from peers, supervisors, allied health personnel, and patients and their families.

Feedback
- Honest and constructive feedback will be provided to the resident in a timely fashion. Formal feedback sessions will take place at the midpoint of each rotation and at the end of the rotation following the evaluation process. There should also be regular feedback to residents on an informal basis.
- The residents and the Program Director are ultimately responsible for the candidates’ successful progress through the completion of the Program. The Program Director will review each rotation evaluation and any concerns will be reviewed with the resident. As well, rotation supervisors and site co-coordinators will be encouraged to make any concerns about the resident known at the earliest opportunity in order that any deficiencies may be addressed in a timely and effective manner. A clear plan for addressing any deficiencies will be developed by the involved parties.
- If two evaluation reports are either “Borderline” or “Poor”, or the resident is absent from the Program for two months in any one year, the resident will be invited for counseling by the Program Director and the resident’s progress reviewed. Such a resident is allowed to continue with the Program at the discretion of the Head of Academic Affairs Center and based on the recommendation of the Program Director and the Residency Program Committee. It is expected that inputs from the tutors and the involved rotation and supervisors will weigh heavily in these considerations.
- Any period of absence in excess of two months will result in the addition of a makeup period. The duration, timing and composition of this period will be at the discretion of Program Director after consultation with the Residency Program Committee and the involved resident.
- The resident must pass the Part 1 examination of Ophthalmology Arab Board at the end of second year of training. Passing the first examination is a prerequisite for promotion to the final year of residency. The examination shall be a written examination covering areas of basic and general clinical Ophthalmology. The candidates are allowed a total of 3 attempts to pass the first board examination.
- If a resident has not passed this exam, the Program Director will initiate a review of the resident’s progress and consideration may be given to withdrawing from the program and selecting an alternate career path.
- To sit for the Final Arab Board of Ophthalmology the resident must have successfully completed all components of the Ophthalmology Residency Program. The candidates are allowed a maximum of three attempts to pass the examination within a period of five years after completion of training

Certification

On satisfactory completion of the entire program of specialist training, the Program Director will notify the Head of Academic Affairs Center and a certificate of completion of training will be issued. The authorized signatories on the certificate will be the Program Director, Director of The Department of Medical Education and Head of Academic Affairs Center.
References & Glossary

- Ophthalmology Residency training Program, McGill University, 2011.
- Program Requirements for Graduate Medical Education in Ophthalmology,

Glossary of Acronyms

- ACGME: Accreditation Council for Graduate Medical Education
- CME: Continuing Medical Education
- DHA: Dubai Health Authority
- ERG: Electro-Retinogram
- FITER: Final In Training Evaluation for the Resident
- HER: Electronic Health Records
- IOP: Intraocular pressure
- LHON: Leber Hereditary Optic Neuropathy
- M&M: Morbidity & Mortality
- MBBS, MBChB: Bachelor of Medicine Bachelor of Surgery
- MD: Master Degree
- MED: Department of Medical Education
- OR: Operating Room
- PG1, 2, 3, 4: Post Graduate Years 1, 2, 3, 4
- PHC: Peripheral Health Centers
- QI: Quality Improvement
- RCA: Root Cause Analysis
- VEP: Visual evoked potential