



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MSc

PROGRAM SPECIFICATIONS

Program Title:

Master of Science in
Ophthalmology and
Ophthalmic Surgery

Code:

OPOP



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MSc

Program Specification

A- Basic Information

1- Program Title: **Master of Science in Ophthalmology and Ophthalmic Surgery**

2- Program Type: **Single** **Double** **Multiple**

3- Department (s): **Ophthalmology and Ophthalmic Surgery Department**

4- Coordinator: **Head of department Prof Mohammed Elsebaey**

5- External Evaluator(s) : **Prof. Ehab Ghoneim, Professor of Ophthalmology – Port-Said University**

6- Last date of program specifications approval: **The bylaws of the Master of Science program in Ophthalmology and Ophthalmic surgery in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities in 2016.**

7-Date of specification revision approval: **Feb 2018**

8- **Number of credit points for this degree: 120 CP**

B- Professional Information

1- Program Aim

The programs provides essential intellectual and clinical information (i.e., cognitive and technical/surgical skills) that are necessary for an ophthalmologist. The curriculum is a content outline for a fund of knowledge. It is not designed to be all-inclusive but rather a guideline for the basic training of ophthalmic specialists. These guidelines aimed to cover the key areas of ophthalmological knowledge and clinical skills deemed important as a basis for clinical practice.

Priority will be given to topics relevant to ophthalmology that are of high value, integrated, and interdisciplinary.

The overall aims of the course are that the student:

- Specify a coherent program of attainment of the knowledge, understanding, skills and attitudes required of an OPHTHALMOLOGY RESIDENTS in order that he/she may obtain the M.SC. in Ophthalmology and Ophthalmic Surgery and meet the person specification for a **Specialist Registrar** in Ophthalmology and Ophthalmic Surgery.
- Complete the minimum training requirements for ophthalmology residency.



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MSc

- Participate in the educational activities such as the regularly scheduled conferences, which cover the following subspecialty areas: retina, glaucoma, cornea, oculoplastics, neuro-ophthalmology, pediatric ophthalmology, uveitis, low vision, and ophthalmic pathology.
- Participate in safe, effective, and compassionate patient care under supervision, commensurate with his/her level of advancement and responsibility.
- Participate in institutional programs and activities involving the medical staff, and adhere to established practices, procedures, and policies of the other institutions participating in activities and rotations assigned as part of the specific training program.
- Adopts positive attitudes towards humans, the community, and science.
- Becomes a continuous self-learner.
- Conform to Hospital bylaws, policies, procedures, and regulations and applicable federal and state laws.

2- Intended Learning Outcomes (ILOs) of the program

By the end of this program, participants should be able to:

a- Knowledge and Understanding:

A1. Discuss Anatomy - of the eye, adnexae, visual pathways and associated aspects of head, neck and neuro anatomy. This includes aspects of embryology, anatomy in childhood and during ageing. It extends to applied anatomy relevant to clinical methods of assessment and investigation (e.g. radiography, MRI).

A2. Explain Physiology - of the eye, adnexae and nervous system, including related general physiology (its laws and phenomena). This extends to the organization, function, mechanism of action, regulation and adaptations of structures and their component tissues relevant to clinical methods of assessment (e.g. acuity, visual fields, electrodiagnostics, intraocular pressure).

A3. Understand Optics and ultrasonics - including the application of physical, geometric and physiological optics to clinical management and an appreciation of the principles of instrumentation and clinical practice in these areas.

A4. Identify Pathology - especially the specialist pathology of the eye, adnexae and visual system but within a relevant general pathological context. This includes histopathology, microbiology and immunology and their inter-relationships (e.g. in the immunocompromised patient).

A5. Identify drugs related to ophthalmology with focus on their onset, duration and mechanism of action and their adverse effects.

A6. Recognize clinical diagnosis of diseases affecting the eye and the adenexa.

A7. Identify tools necessary for the diagnosis of ophthalmic diseases.

A8. Identify surgical skills for basic ophthalmic procedures.

A9. Recognize medical and surgical emergencies and critical care in ophthalmology.



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MSc

- A10. Discuss general medical problems in relation to the eye (e.g. Hypertension, Pulmonary Hypertension, Jaundice, Diabetes Mellitus, Thyroid disorders, Pituitary disorders and Connective tissue diseases)
- A11. Identify common neurological problems (e.g. Pupillary disorders, Visual pathway disorders, facial palsy and multiple sclerosis) with focus in Ophthalmology related problems.
- A12. Identify general surgical problems (e.g. Blood transfusion, Shock, Wound healing, Head injuries and Head and neck swellings).
- A13. Identify Health Service Management skills – including the political and economic context of patient care, the role of constituent and associated agencies and relevant senior personnel roles in the organization
- A14. Demonstrate basic knowledge of research ethics
- A15. Demonstrate basic knowledge of biostatistics
- A16 Recognize basis and principles of quality assurance in professional practice related to Ophthalmology

b- Intellectual Skills

- B1- Acquire ophthalmological problems solving skills based on the given clinical data and previous basic knowledge and understanding in ophthalmology.
- B2- Demonstrate a directed ophthalmological examination and recording and interpreting the physical signs elicited.
- B3. Demonstrate competency in clinical assessment regarding:
- Involvement of the eye in diabetes and other systemic disorders e.g. hypertension.
 - Common neuro-ophthalmic disorders to include implications of visual field abnormalities.
 - Common paediatric ocular problems including squint and amblyopia
 - Major causes of vision impairment and blindness and their prevention, including cataract, glaucoma, macular degeneration, and acute and gradual visual loss with and without pain.
 - Diagnosis and management of red eyes, ocular trauma, visual loss and ophthalmic emergencies.
 - Understanding of the basics of refractive errors and their correction.
 - Retinal disorders including detachment, retinal vascular disorders and the use of lasers.
- B4. Order appropriate investigations, whilst avoiding unnecessary tests.
- B5. Formulate (at least for common conditions) a definitive ophthalmological diagnosis.
- B6. Prescribe appropriate local and systemic therapy including antibiotics, anti-virals, steroids, mydriatics and analgesics.
- B7. Determine the progress of disease or response to treatment or surgery against baseline parameters or that expected through wound healing etc.
- B8. Recognize and appropriately manage both local and systemic complications of treatment.
- B9. Follow the prevention precautions regarding contagion and cross infection through sterilization/disinfection of hands and instruments and adopting measures to reduce the emergence of resistant microorganisms.
- B10 Integrate different information to solve professional problems



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MSc

- B11 Formulate scientific papers in Ophthalmology.
B12 Assess risk in professional practices in the field of Ophthalmology

c- Professional and Practical Skills

- C1. Interpret investigations appropriately according to the limitations of the tests and their context.
C2. Formulate a relevant differential diagnosis, to choose an appropriate management strategy from the options available and to plan and implement that strategy.
C3. Value clinical audit in improving practice.
C4. Appreciate importance of basic and clinical research in advancing knowledge.
C5. Demonstrate a style of care which is:
Humane (especially compassion in ‘breaking bad news’ and in the management of the visually impaired, and recognition of the impact of visual impairment on the patient and society.)
Reflective (including recognition of the limits of his/her knowledge, skills and understanding.)
Ethical (e.g. in relation to rationing issues, truth-telling and disclosure of patient information.)
Integrative (especially involvement in the inter-disciplinary team in the eye care of children, the handicapped and the elderly.)
Scientific (e.g. critical appraisal of the scientific literature, evidence-based practice and use of information technology and statistics.)
C 6. Apply occupational visual standards and visual standards for driving, and appropriately referring patients for provision of low vision aids, blind rehabilitation and blind registration.
C7. Assess of vision including distance acuity using Snellen test types and objective and subjective refraction, reading vision, color vision using Ishihara plates and confrontation visual fields (monocular, binocular and red).
C8. Perform a complete external eye examination including assessment of eye movements, the palpebral aperture and levator excursions.
C9. Use slit lamp biomicroscopy including the use of stains, local anaesthesia etc.
C10. Examine the pupils including swinging flashlight test.
C11. Perform pharmacological tests for Horner’s Syndrome and Adie’s pupil.
C12. Perform fundus examination including the use of the direct ophthalmoscope, indirect ophthalmoscope and slit lamp biomicroscopy with diagnostic contact lenses and non-contact lenses.
C13. Perform a directed general medical and neurological examination.
C14. Perform a directed pre-operative assessment for general or local anaesthesia including venesection, cannulation and set-up of intravenous infusions.
C15. Obtain preoperative informed consent from the patient.
C16. Use topical, peribulbar, retrobulbar, sub-tenon’s or other regional anaesthesia, and recognising complications of such anaesthesia.
C17. Determine the time of administration of steroids or other drugs subconjunctivally and in the sub-tenon’s space and orbital floor.



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MSc

- C18. Use the operating microscope including its set-up and appreciation of the dangers of photic maculopathy.
- C19. Follow sterile and non-touch aseptic techniques.
- C20. Demonstrate basic microsurgical skills including incisions, tissue handling and haemostasis, instrument set-up, instrument handling and suturing/wound closure.
- C21. Use ophthalmic lasers Safely.
- C22. Write and evaluate professional reports

d- General and Transferable Skills

- D1- Communicate effectively with peers and group facilitators.
- D2- Show respect to other team members' points of view.
- D3- Function effectively in a group.
- D4- Master computer skills in research, data base filing and preparation of presentation
- D5- Work in team.
- D6- Acquire managerial skills
- D7- Communicate ideas and arguments effectively
- D8- Perform self-evaluation and specify his own educational needs
- D9- Manage time effectively
- D10- Adopt the principles of self and lifelong learning
- D11- State regulations and outcomes for evaluation of others

3- Academic Standards

3a - External References for Standards (Benchmarks)

- International Council of Ophthalmology Residency Curriculum, 2012. Website: <http://www.icoph.org/>
- The standards of the National Authority of Quality Assurance and Accreditation in Education (NAQAAE). Website: www.naqaae.org

3b - Comparison of Provision to External References

- A combination of courses were selected from the previously mentioned program.
- Adaptation of these courses according to the Regional and Egyptian contexts was carried out.

4- Curriculum Structure and Contents

4a- Program duration: the program lasts for a minimum of 2 academic years and maximum 5 years, as specified in the internal bylaws for postgraduate studies based on credit points system in the Faculty of Medicine, Suez Canal University approved on February 7th, 2016.



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MSc

4b- Program structure:

Master Program Credit points (CP) structure:

Total needed credit points for getting master degree 120 CP

The program consists of **First part 30 CP, Thesis 30 CP, and Second part 60 CP**

1. The first part of the program: 30 CP, its duration (15 weeks) for one academic semester. It includes
 - a. A course in Statistics and Research Methodology (BR) planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes 4 CP.
 - b. A courses in Research ethics planned (RE) and held in the Forensic and Toxicology Department of the Faculty of Medicine, Suez Canal University. This part includes 2 CP.
 - c. One elective course (E) , the students should select one elective among six courses. This part includes 2 CP.
 - d. One course titled “Anatomy of the eye (OPOP01). Includes 6 CP.
 - e. One course titled “Physiology of the eye (OPOP02). Includes 5 CP.
 - f. One course titled “Optics” (OPOP03). Includes 5CP.
 - g. One course titled “General Surgery” (OPOP04). Includes 3 CP
 - h. One course titled “Internal medicine” (OPOP05). Includes 3 CP
2. Master thesis: 30 CP, not included in the total marks for master degree, the candidate has the right to register the thesis protocol after 6 months from the degree registration. The thesis defense is allowed after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.
3. The second part of the program: 60 CP, its duration (45 weeks) for 3 consecutive academic semesters. The second part comprises the specialized courses in Ophthalmology, planned and held in the Ophthalmology Department. This part lasts for 1.5 years ending by written and practical exams.

4bi- No. of hours per week: 2 CP / week which equivalent 50 hours/ week, including lectures, tutorials, self-learning and hands-on training.

4bii- No. of credit Points: the Master program is 120 Credit Points

Every credit point include 25 working hour (50% = 12.5 hours for face to face learning activities, and 50% =12.5 hours for self-learning activities).



Faculty of Medicine
Suez Canal University

Ophthalmology Department
Program Specification- MSc

5-Program Courses

5.1- Level/Year of Program: 1st part MSc

Courses			Assessment				
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam
			No of Papers	Duration	Marks		
RB	Research methodology and Biostatistics	4	1	2 hours	80		
RE	Research Ethics	2	1	1 hour	40		
OPOP01	Anatomy and Embryology	6	1	2 hours	90	30	
OPOP02	Physiology	5	1	2 hours	75	25	
OPOP03	Optics	5	1	2 hours	75	25	
OPOP04	General Surgery	3	1	1 hour	25	10	25
OPOP05	General Medicine	3	1	1 hour	25	10	25
E	Elective Course*	2	1	1 hour	40		
Total		30 credit points			600 marks**		

*E: Student should select one course of the following as an elective course:

One elective course has 2 CP. The students should select one elective in first part of the Master degree

E01	Evidence Based medicine	(Community Department)
E02	Scientific Writing	(Medical Education Department)
E03	Quality in Medical Education	(Medical Education Department)
E04	Infection Control	(Microbiology Department)
E05	Critical Appraisal	(Community Department)
E06	Communication Skills	(Medical Education Department)



Faculty of Medicine
Suez Canal University

Ophthalmology Department
Program Specification- MSc

5.2- Level/Year of Program: 2nd part MSc
a. Compulsory

Courses			Assessment					
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam	Continues assessment *(Portfolio)
			No of papers	Duration	Marks			
OPOP06	Scientific and theoretical Courses in Ophthalmic Medicine and Surgery	20	3	3 hours For each paper	110 for each paper	110	330	330
	Practical training in Ophthalmic Medicine and Surgery	20						
	Scientific, theoretical and practical courses in ocular pathology and microbiology	15						
	***Scientific activities	5 (not included in the total marks)						
Total		60 credit points			1100 score			

*Portfolio scores distributed in the different parts of the portfolio and its total score included among the total mark of the second part

***Scientific activities are not included in the total marks

5.3- **Thesis:** A faculty senior & junior supervisor from the staff members are nominated by the department council to prepare a proposal of the thesis protocol after the selection of a subject that is complementary to the research plans of the department. Data collection, methodologies, study question, time table, ethical considerations and budget are formulated by the candidate under guidance of his supervisors into a research project. The research protocol is then peer



*Faculty of Medicine
Suez Canal University*

*Ophthalmology Department
Program Specification- MSc*

reviewed by two different staff members nominated by the Head of the department who share their ideas and comments with the supervisors to reach to the final form. The research protocol is discussed then openly in one of the department councils to be approved and diverted to the Faculty research committee where it is subjected to a critical appraisal to meet the research basic standards set by the committee. The final approvals of the research protocol are then issued by the committee of post graduate studies, the Faculty and University Council to be registered. The candidate has the right to register his/her thesis protocol after 6 months from the degree registration. The first time for thesis defense after 6 months from the date of the faculty council approval on the thesis protocol and passing the first part exam.

N.B. Thesis represents 30 credit points not included in the total mark for master degree.

6-Program Admission Requirements

- The program accepts candidates with Bachelor degree in Medicine and Surgery with minimum grade of GOOD.
- Candidates must finishing house officer training year before admission to the program.
- The program accepts candidates attending **Basic Specialty Training** program in University Hospitals, Military hospitals or Ministry of Health hospitals and institutions that are responsible for training their candidates the skills needed to achieve the goals of the program.
- Candidates must introduce Official approval from his/her training hospital or institution.
- Registration for the program opens 2 times/year, according to the internal bylaws for postgraduate studies of the Faculty of Medicine, Suez Canal University.

7- Student Assessment Methods

- 7.1 Written (MEQ)** to assess the cognitive domain.
- 7.2 MCQs** to assess the cognitive domain
- 7.3 Oral Viva Cards** to assess higher cognitive and attitude domains.
- 7.3 Observations** to assess practical and presentation skills.
- 7.4 Portfolio** to assess the cognitive, psychomotor and the affective domains.

8- Weighting of Assessments

Type of exam	
First part (30 credit points= 600 mark)	
• Written exam	450
• Oral and practical exam	150
• <u>Total</u>	600



*Faculty of Medicine
Suez Canal University*

*Ophthalmology Department
Program Specification- MSc*

Second part (60 credit points including 5 credit points not included in the total marks =1100 mark)

• Oral exam	110
• Practical exam	330
• Written exam	330
• Portfolio	330
<u>Total</u>	1100

Total of the Master degree 1700

9- Regulations for Progression and Program Completion

The regulations for program completion follow the regulations of Master of Science in Ophthalmology and Ophthalmic Surgery in the Faculty of Medicine, Suez Canal University approved by the Supreme Council of Universities.

First part

- Passing level 60% of total marks of the exam
- At least 50% passing level of the total written exam marks

Second part

- Passing level 60% of total marks of the exam
- Passing level 60% is prerequisite for MSc.

Thesis/Assay

- Passing thesis defense is prerequisite for getting MSc.

10- Evaluation of Program Intended Learning Outcomes (ILOs)

Evaluator	Tool	Sample
1- Postgraduate students	Needs assessment questionnaires	Random sample of participants
2- Alumni	Self-administered questionnaires	Comprehensive sample
3- Stakeholders	Self-administered questionnaires	Random sample
4- External Evaluator(s) (External Examiner(s))	External audit of the program specifications	
5- Other		

Head of Ophthalmology Department

Prof. Mohammed Elsebaey

Date: February, 2018