



Faculty of Medicine
Suez Canal University



Ophthalmology Department
Program Specification- MD

PROGRAM SPECIFICATIONS

Program Title:

Medical Doctorate in
Ophthalmology and
Ophthalmic Surgery

Code:

OPOP



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Program Specification

A- Basic Information

1- Program Title: **Medical Doctorate (MD) in Ophthalmology and Ophthalmic Surgery**

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

3- Department (s): **Ophthalmology 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 MD program in Ophthalmology and Ophthalmic surgery in the Faculty of Medicine, Suez Canal University were approved by the Supreme Council of Universities on 27th of November, 2016.**

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

8- **Number of credit points for this degree: 180 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 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 should:

- Specifies a coherent program of attainment of the knowledge, understanding, skills and attitudes required of an OPHTALMOLOGY SPECIALISTS in order that he/she may obtain the M.D. in Ophthalmology and Ophthalmic Surgery and meet the person specification for a **Consultant Registrar** in Ophthalmology and Ophthalmic Surgery.
- Complete higher specialist (**Doctoral Specialist**) training requirements regarding scientific knowledge and practical skills.
- Attend a subspecialty training course.
- Adopt positive attitudes towards humans, the community, and science.
- Implement and reinforce the rules of both medical practice and research ethics.
- Specify basic and updated theoretical knowledge in the field of ophthalmology with special regards to evidence-based rules as well as international and local medical guidelines.



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- Enhance the self-education abilities and adopting it as a way of continued medical education.
- Refine the clinical skills based on a systematic approach to diagnose ophthalmic diseases and to manage them efficiently and effectively.
- Acquire the practical and procedural skills that are necessary in ophthalmic practice. Awareness of the new tools and how to utilize and analyze their results to help the profession.
- Refine the surgical skills and performance to the state of the art.
- Update the ideal management of medical and surgical emergency states.
- Understand the basics of well-designed research that aims at the community benefit.
- Improve of communication and expression skills.
- Develop the leadership skills in the field of ophthalmology.
- Improve the teaching (tutoring) abilities.

2- Intended Learning Outcomes (ILOs) of the program

a- *Knowledge and Understanding:*

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

A1. Discuss Anatomy - of the eye, adnexae, visual pathways and associated aspects of head, neck and neuroanatomy. This includes aspects of embryology, with anatomical changes during age progress. 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. Demonstrate 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 General and Ocular 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. Demonstrate 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

A7. Demonstrate advances knowledge of biostatistics

A8. Critically appraise research designs relevant to healthcare.

A9. Recognize Basic of ethics and medico legal aspects of professional practice, related to Ophthalmology

A10. Recognize the principles of quality in professional practice related to ophthalmology

b- *Intellectual Skills*



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

- B1- Acquire ophthalmological problem 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 including localization of the site of lesion with identification of its nature.
 - 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. Assess Risk assessment in professional practices
- B11. Make professional decision in relation to different professional sequences
- B12. Be innovative and creative and discuss on basis and evidence
- B13. Demonstrate insight into research and scientific method through:
- critical appreciation of methodology;
 - formulating research questions that are pertinent to medicine;
 - choice and application of appropriate quantitative and qualitative methodologies;
 - collecting, analyzing and interpreting data;
 - Analyzing and using numerical data (Use simple statistical methods)
- B14. Write scientific papers

c- Professional and Practical Skills

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

- C1. Interpret investigations appropriately according to the limitations of the tests and their context.



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- 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. Examine the angle of the anterior chamber using different gonioscopic methods.
- C12. Perform cranial nerve examination
- C13. Perform pharmacological tests for Horner’s Syndrome and Adie’s pupil.
- C14. Perform fundus examination including the use of the direct ophthalmoscope, indirect ophthalmoscope and slit lamp biomicroscopy with diagnostic contact lenses and non-contact lenses.
- C15. Perform a directed general medical and neurological examination.
- C16. Perform a directed pre-operative assessment for general or local anaesthesia including venesection, cannulation and set-up of intravenous infusions.
- C17. Obtain preoperative informed consent from the patient.
- C18. Use topical, peribulbar, retrobulbar, sub-tenon’s or other regional anaesthesia, and recognising complications of such anaesthesia.
- C19. Determine the time of administration of steroids or other drugs subconjunctivally and in the sub-tenon’s space and orbital floor.
- C20. Use the operating microscope including its set-up and appreciation of the dangers of photic maculopathy.
- C21. Follow sterile and non-touch aseptic techniques.



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C22. Demonstrate basic assessment, evaluation and microsurgical skills including incisions, tissue handling and haemostasis, instrument set-up, instrument handling and suturing/wound closure.

C23. Safely use ophthalmic lasers.

C24. Write and evaluate professional reports

C25. Plan to develop professional practice and improve performance of others

d- General and Transferable Skills

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

D1- Communicate effectively with peers and group facilitators.

D2- Show respect to other team members' points of view.

D3- Manage small and large groups effectively.

D4- Function effectively in a group.

D5- Master computer skills in research, data base filing and preparation of presentation

D6- Work in team.

D7- Acquire managerial skills

D8- Educate and evaluate performance of others

D9- Do self-evaluation and lifelong learning

D10- Use different resources to obtain knowledge and information.

D11- Plan for scientific meetings and Manage time

D12- Communicate effectively with patients

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

4a- Program duration: The program lasts for a minimum of 3 academic years and maximum 7 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.



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4b- Program structure:

MD Program Credit points (CP) structure:

Total needed credit points for getting MD degree 180 CP

The program consists of **First part 30 CP, Thesis 50 CP, and Second part 100 CP**

1. **The first part of the program:** 30 CP, its duration (15 weeks) for one academic semester. The first part comprises the following:
 - a. A course in Research Methodology planned and held in the Community Medicine Department of the Faculty of Medicine, Suez Canal University. This part includes 8 CP.
 - b. Two electives each one has 2 CP. The students should select one elective which has not been selected in the Master Degree.
 - c. The specialized courses in Ocular anatomy, ocular physiology, ocular pathology and microbiology and optics, planned and held in the Ophthalmology Department. They include 18 CP.
- 3- **MD thesis:**50 CP, no scores for thesis. 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.
- 4- **The second part of the program:** 100 CP, its duration (75 weeks) for 5 consecutive academic semesters. The second part comprises the specialized courses in Ophthalmology, planned and held in the Ophthalmology Department. This part lasts for 2 years ending by written, oral and practical exams.

4bi. No. of credit Points: the MD program is 180 credit Point system.

Every credit point include 25 working hour (30% = 7 hours for face to face learning activities, and 70% =18 hours for self-learning activities).



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5. Program Courses

Courses			Assessment				
Code No.	Course Title	No. of Credit points	Written Exam			Oral exam	Practical or clinical Exam
			No of Papers	Duration	Marks		
BR	Biostatistics and Research methodology	8	1	3 hours	160		
OPOP51	Ocular Anatomy	4	1	1 hour	60	20	
OPOP52	Ocular Physiology	5	1	1 hour	75	25	
OPOP53	Ocular Pathology and microbiology	5	1	1 hour	75	25	
OPOP54	Optics	4	1	1 hour	55	25	
E	Two Elective courses*	2+2	1+1	1 hour+1 hour	40+40		
Total		30 credit points			600 marks**		

5.1- Level/Year of Program: First part of MD (30 CP)

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

Two elective courses each one has 2 CP. The students should select two elective which has not been selected before in 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)



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5.2- Level/Year of Program: Second part of MD program (100 CP)

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			
OPOP55	Advanced Scientific and theoretical Courses in Ophthalmic Medicine and Surgery	30	3	2 papers, 3 hours for each and one paper of one and half hours	225 + 225 + 90	180	540	540
	Advanced Practical training in Ophthalmic Medicine and Surgery	60						
	***Scientific activities	10 (not included in the total marks)						
Total		100 credit points			1800**marks			

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

**every credit point equal 20 marks

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

5.3 Thesis (50 CP): 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 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



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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.

6- Program Admission Requirements

- The program accepts candidates with Masters in Ophthalmology with at least a grade of GOOD.
- The program accepts candidates attending **Higher Specialty Training** program (Doctoral Specialist) 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.
- 7.4 Observations** to assess practical and presentation skills.
- 7.5 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	505
• Oral exam	95
• <u>Total</u>	600
Second part (100 credit points including 10 credit points not included in the total marks =1800 mark)	
• Oral exam	180
• Practical exam	540
• Written exam	540
• Portfolio	540
<u>Total</u>	1800



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9- Regulations for Progression and Program Completion

- The regulations for program completion follow the general regulations for the Faculty of Medicine, Suez Canal University for MD approved by the Supreme Council of Universities. The program is considered complete with the accomplishment of 2 summative assessment (for the first and the second parts) and the defense of a thesis developed and submitted for the purpose of acquiring the degree.
- **First part**
Passing level 60% of total marks of the exam and 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% total of practical and oral exam
- **Thesis/Assay**
Passing discussion is required for MD degree

10- Evaluation of Program Intended Learning Outcomes (ILOs)

Evaluator	Tool	Sample
1- Postgraduate students	Needs assessment questionnaires	Random sample of participants
2- Alumni(N/A since this is the first time to implement the program)	N/A	N/A
3- Stakeholders	Self-administered questionnaires DELPHI Focus groups	According to the method
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