21 September University of Medical & Applied Sciences
Faculty: Medicine
Program: MD Program in Ophthalmology Surgery

Ophthalmology Surgery MD Program Specification

Program Specifications of MD Program in Ophthalmology Surgery

Introduction

The MD-PhD in Ophthalmology Surgery is a comprehensive dual-degree program designed to prepare medical professionals with advanced clinical expertise and strong research capabilities in the field of ophthalmology and vision science. This integrated program combines rigorous clinical training with scientific inquiry, enabling graduates to become both practicing physicians and independent researchers.

The program is structured in two distinct yet interconnected phases. The first phase is the MD phase, during which students acquire in-depth knowledge and hands-on experience in diagnosing and treating various eye diseases. This phase emphasizes clinical excellence, covering subspecialties such as cornea, retina, glaucoma, oculoplastics, pediatric ophthalmology, and neuro-ophthalmology. Students develop a strong foundation in surgical techniques, patient care, and evidence-based medical practice.

Upon successful completion of the clinical phase, students advance to the second phase—the PhD research phase. In this phase, students engage in original scientific research under the supervision of experienced faculty members. The research typically addresses critical issues in ophthalmology, aiming to contribute meaningful solutions to challenges in eye health and visual sciences. The culmination of this phase is the submission and defense of a doctoral thesis, which demonstrates the student's capacity to conduct independent, high-level academic research.

Through its dual focus on clinical proficiency and scientific innovation, the MD-PhD in Ophthalmology program equips graduates with a unique set of skills that positions them as leaders in both patient care and academic medicine. Upon graduation, the student is awarded both a Medical Doctor (MD) and Doctor of Philosophy (PhD) degree, officially recognized as a practicing physician and researcher, capable of bridging the gap between clinical practice and biomedical research.

The program ensures a balance between clinical expertise and scientific innovation, Graduates are equipped to pursue leadership roles in academic institutions, clinical research, or advanced medical practice. By merging clinical expertise with scientific discovery, the program empowers its graduates to make meaningful contributions to the future of ophthalmology—both at the bedside and in the research lab.

Program Identification and General Information

1	**Scientific name of the program:**	**Medical Doctorate (MD) in Ophthalmology Surgery**

2	The body responsible for granting the degree:	21 September University for Medical and Applied Sciences
3	The body responsible for the program:	department of Ophthalmology
4	Departments participating in the program:	All medical department
5	Study Language of the Program:	English – Arabic
6	Starting year of the program:	2023
7	Study methods in the program:	Full time
8	Program Type	Single
9	Location of Delivery:	University campus and Hospital
10	Study system:	Semesters
11	Number of years needed for completion of the program:	5 years
12	Total credit hours	141 credit hours
13	Targeted qualification level(s) in the program	Medical Doctorate (MD)
14	The profession(s) of graduates:	- Specialist clinicians in Ophthalmology Surgery - Good Academic staff - Researchers
15	Required qualification for admission to the program:	MBBS degree, academic master degree
16	Minimum grade requirements:	Good
17	Other admission requirements:	None
18	Prepared by:	Asco. Prof. Nabeel Taresh
19	year of the program Accreditation:	

University Vision, Mission and Aims

▪ University Vision

A Contemporary University with National Responsibility and Faith Identity

▪ University Mission

Leadership of transformation headway in managing and providing the health care with all partners via having the distinction standard in education and applied and medical researches that meet the needs of Yemeni people and regional influence.

▪ Aims of the University

- Ensuring the application of quality standards and having the distinction standards in medical and applied sciences, scientific research and community service.

- Adopting student-centered learning, the partnership with them for life, consolidating the principles of national responsibility and faith identity, looking after them and developing their capabilities after graduation and during work.
- Attracting and Eemploying scientists, cadres and talents to gain minds and put an end for the "brain drain" in a way that promotes and ensures the availability of thinkers, businessmen and good citizens.
- Developing the distinguished academic infrastructure continuously and establishing modern research and service centers with high efficiency that can give a real effect locally and regionally.
- Enhancing the university status as a preferred partner for local, regional and international partnership through implementing creative styles of education, exchanging researches and knowledge, and providing real and effective outcomes for developing professional practices to benefit from them locally and regionally.
-

Postgraduate studies and scientific research Mission and Aims

Contemporary in presenting programs of postgraduate studies and scientific research locally and regionally.

- **Postgraduate studies and scientific research Mission**

Postgraduate Studies and Scientific Research seeks to prepare and implement a qualitative and un applied scientific programs, in order to, prepare excellent research-leaders, able to solve community problems**.**

- **Postgraduate studies and scientific research Aims**

1. Create qualitative and attractive programs for graduates from local and regional universities.
2. Continuous development and updating of postgraduate programs according to comprehensive quality standards .
3. Prepare distinctive researchers through continuous education programs and develop research skills.
4. Participate with similar scientific organizations in scientific research
5. Develop the infrastructure, financial and human resources for programs of postgraduate and scientific research, according to academic accreditation standards .
6. Automate the system of postgraduate and scientific research and activate electronic contents.
7. Attract the experts of academic and researchers from internal and external environment.

Faculty Vision, Mission and Aims

▪ Faculty Vision

A distinguished Medical Faculty capable of competing locally and regionally.

▪ Faculty Mission

That the Faculty of Medicine be contemporary in providing a distinguished educational level based on creativity and innovation and a true partner in facing the main national health challenges and in treating patients with high quality based on research to solve problems that leads to integrated health care in an ethical context

▪ Aims of the Faculty

- Finding effective solutions for the university hospital, the infrastructure of the College and its annual budget.
- Addressing the gap in human resources adequately and efficiently, and developing them on a professional basis.
- Improving the quality and quality of the human medicine program in accordance with quality standards and national and international academic accreditation.
- Strengthening governance and management systems, consolidating decentralization, and practicing transparency and accountability.
- Building the students' abilities to think, analyze and solve problems in research methods that qualify them for the labor market and achieve their practical and professional aspirations in the future.
- Contribute to supporting scientific research directed on the basis of planning related to comprehensive development goals in Yemen.
- Forming a real and effective partnership with the community, its institutions and its counterparts in a national, Arab and international context

Department Mission and Aims

Department Mission ▪

The mission of the Ophthalmology Department is to provide high-quality, contemporary education and training in eye health, grounded in innovation, scientific inquiry, and ethical medical practice. We are committed to preparing future ophthalmologists who are professionally competent, research-oriented, and capable of addressing national and regional eye health challenges. Through excellence in clinical care, education, and research, we strive to contribute meaningfully to integrated and patient-centered healthcare that aligns with the core values and mission of the Faculty of Medicine.

Department Aims ▪

1- To develop professional and ethically responsible ophthalmologists who are committed to delivering high-quality, patient-centered care aligned with national health priorities.
2- To promote continuous learning and scientific research by fostering a culture of inquiry, innovation, and evidence-based practice in ophthalmology.
3- To encourage teamwork and interprofessional collaboration in both clinical and academic settings to enhance comprehensive eye care services and training.
4- To instill a spirit of accountability and transparency in all departmental activities, including education, research, and patient care.

Program Mission and Aims

▪ Program Mission

The mission of the MD Ophthalmology Surgery Program is to prepare a new generation of physician-scientists who are equipped with advanced clinical expertise in ophthalmology Surgery and strong scientific research capabilities. The program aims to integrate medical education with innovative research to address national and global challenges in eye health. It emphasizes ethical practice, evidence-based care, and academic leadership, in alignment with the Faculty of Medicine's commitment to excellence, creativity, and societal responsibility.

▪ Program Objectives

The Ophthalmology surgery Medical Doctorate Program at 21 September University aims to:

1. To graduate ophthalmologist-scientists with dual competencies in clinical care and research, capable of delivering high-quality patient services and contributing to scientific advancement in eye health.
2. To foster innovation and research excellence by engaging students in high-impact ophthalmic research that addresses real-world health problems and improves patient outcomes.
3. To promote professional ethics, accountability, and leadership in both clinical and academic settings, supporting a culture of transparency and responsibility.
4. To encourage interdisciplinary teamwork and lifelong learning, enabling graduates to effectively collaborate within healthcare systems and stay current with evolving medical and scientific knowledge.

▪ Graduates' attributes

Core Medical Knowledge

1. Comprehensive Understanding of Eye Diseases:
   - In-depth knowledge of various eye and visual system conditions, including surrounding structures like the optic nerve and eyelids, with the ability to identify normal and pathological changes.

Research Skills

1. Research Leadership:
   - Ability to lead research projects, apply scientific research principles and statistics to advance knowledge in ophthalmology, and translate findings into clinical practice.

Clinical and Surgical Skills

1. Proficiency in Eye Examinations and Surgery:
   - Skilled in performing comprehensive eye exams, diagnosing ocular diseases accurately, and conducting precise surgeries like retinal, corneal, cataract, and strabismus surgery using advanced techniques.

Teamwork Skills

1. Collaborative Work:
   - Ability to work effectively as part of a multidisciplinary medical team, coordinating with other healthcare professionals and institutions.

Professional and Ethical Competencies

1. Professionalism and Ethics:
   - Commitment to maintaining professional and ethical standards, including patient confidentiality and respectful relationships with colleagues.
2. Quality Management:
   - Planning and implementing quality assurance protocols to monitor procedures and devices, and integrating and evaluating data to ensure accuracy and minimize errors.
3. Self-Development:
   - Commitment to ongoing education and professional development to stay current with advancements in ophthalmology.

Quality and Safety Commitment

1. Safety in Medical Environment:
   - Applying safety protocols when handling diagnostic equipment and chemicals, and adhering to standard precautions and regulatory guidelines.
2. Quality Assurance:
   - Identifying potential errors and developing solutions, and applying quality management principles in ophthalmology settings.

Program Benchmarks
Egyptian NRS
Indian NARS

Program Benchmarks:

1- Mansoura University
https://medfac.mans.edu.eg/index.php/en/
2- Minia University
https://med.minia.edu.eg/master%20program2.aspx
3- University of Ottawa
https://www.uottawa.ca/faculty-medicine/md-phd
4- University of California, San Francisco (UCSF)
https://ophthalmology.ucsf.edu/ophthalmology-residency-program/curriculum/ ;
https://ophthalmology.ucsf.edu/k12-program-old/k12_fignotitle2/
5- National University of Singapore (NUS) – Singapore
https://www.duke-nus.edu.sg/education/our-programmes/md-phd-programme
6- Kyoto University – Japan
https://www.med.kyoto-u.ac.jp/en/faculty/medicine/e_project/

ملحق (1) المعايير الأكاديمية للمحتوى لعينة الاعتماد.
ملحق (2) مسح أسماء البرامج المماثلة للبرنامج الحالي.
ملحق (3) مسح مخرجات التعلم في البرامج المماثلة للبرنامج الحالي.
ملحق (4) مسح الساعات المعتمدة للبرامج المماثلة للبرنامج الحالي.
ملحق (5) مسح المقررات الدراسية في البرامج المماثلة للبرنامج الحالي.

Survey of Similar Accredited Programs at National and International Universities (Benchmarks)

Data Required	Similar Accredited Programs						Current program
	1st	2nd	3rd	4th	5th	6th	
Program Name	Medical Doctorate in Ophthalmology	Medical Doctorate in Ophthalmology	MD/PhD in Ophthalmology	MD/PhD in Medical Sciences (Ophthalmology-focused research available)	Combined MD-PhD Track	MD-PhD Program in Medical Science (Ophthalmology Focus)	MD in Ophthalmology
Faculty/Department	Faculty of Medicine/ Ophthalmology department	Faculty of Medicine / Ophthalmology department	Faculty of Medicine, University of Ottawa	UCSF School of Medicine, Department of Ophthalmology (and related departments for research)	Duke-NUS Medical School (jointly with National University of Singapore)	Graduate School of Medicine – Department of Ophthalmology	Faculty of Medicine
University	Mansoura University	Minia University	University of Ottawa	University of California, San Francisco (UCSF)	National University of Singapore (NUS)	Kyoto University	21 September University
Country	Egypt	Egypt	Canada	United States	Singapore	Japan	Yemen
Study Type	single	single	double	Double	double	double	double

Study Mode	On-campus + Clinicals	On-campus + Clinicals	Full-time	In-person (with clinical and research components)	On-campus	On-campus	On-campus + Hospital
Number of Semesters	(6 semesters) 3 years	Minimum 3.5 years	11 semesters (3 years of PhD + 2 summer semesters + 2 years of MD)	16-18 semesters (typically 8 years) depending on research and clinical schedule	14 semesters (typically 7 years)	Approx. 14 semesters (7 years)	6 years
Total Credits (Without Thesis)	120 ECTS	1416 hour	33 credits (6 credits from graduate studies + 27 credits from PhD)	Not specified as the program is research-based, but typically around 120-160 credits for the MD component	Varies depending on MD and PhD components	Varies by track; typically ~30–40 credits	111 credit
Core Course Credits	60 CH	1152 hours	27 credits	Core courses are mainly focused on medical sciences and research training; MD portion includes essential topics	Typically involves required core courses in basic and clinical sciences	Estimated ~20–25 credits	74 credit
Elective Course Credits	30 CH	96 hours	6 credits	Limited; mostly customized through research tracks, electives available in clinical and biomedical fields	Varies by student selection and research focus	Estimated ~10–15 credits	-
Number of Core Courses	11	6	9 courses (3 credits each)	Typically about 10-12 core courses for the MD portion, focusing on medical sciences and clinical education	Specific core courses within MD program	Approx. 4–6 (Basic Medical Sciences, Clinical Skills, Research Methods)	28
Number of Elective Courses	4	2	2 courses	Variable, depends on student's chosen research track; Ophthalmology electives may be available in clinical years	Based on student's research interest and research phase	Varies depending on research interest and supervisor	-
Bridging Courses (if any)	None	None	No specific bridging courses provided in the program	Not required; however, some students may take bridging courses if transitioning between MD/PhD components	Depending on specific needs, bridging courses may be required	Possible depending on undergraduate background (not always required)	-

Thesis Credits	15 credit hours. 4 semesters, 24 months , starting from the 2nd semester, till 5th semester.	18 months	27 credits	Thesis credits are part of the PhD portion (usually 3-5 years of focused research); typically 30-60 thesis credits	Research thesis is an integral part of the PhD component, typically full-time research	Approx. 20–30 credits (based on research work and dissertation)	30 credit
Total Credits (Courses + Thesis)	150 ECTS	1416 hour + 18 months	33 credits	Around 200-250 credits depending on research duration and elective course choices	Composed of medical courses and PhD research credits	Estimated 60–70 credits	141
Thesis Duration	2 years	+ 18 months	Two summer semesters after the first and second year of the MD program	3-5 years for the research and writing of the PhD thesis	2-3 years (depending on research focus and completion)	3 years (Years 5–7)	2 years
Minimum Program Duration	3 Years	3 Years	5 years (3 years PhD + 2 years MD)	Typically 7 years (after which students return to clinical training)	7 years (MD and PhD together)	7 years	5 Years
Maximum Program Duration	5 years	5 years	7 years (with the possibility of one additional year in exceptional cases)	Typically 8 years, although some students may extend the duration based on research and thesis requirements	Typically 8-9 years	Typically 8 years	7 years

Intended Learning Outcomes (ILOs)	
Knowledge and Understanding **(A)**	
	Upon successful completion of the postgraduate MD in Ophthalmology Program, the graduates will be able to:
A1	Demonstrate advanced knowledge of ocular anatomy, physiology, development, and the pathophysiology of common and rare eye diseases.
A2	Understand ophthalmic pharmacology and the principles of diagnostic and imaging modalities used in ophthalmology.
A3	Evaluate indications, risks, and expected outcomes of medical and surgical interventions in ophthalmology.
A4	Apply principles of evidence-based medicine, research methodology, and ethical practice in ophthalmology.

Intellectual Skills **(B)**

	Upon successful completion of the postgraduate MD in Ophthalmology Program, the graduates will be able to:
B1	Perform comprehensive ophthalmic assessments and accurately diagnose anterior and posterior segment diseases.
B2	Interpret diagnostic investigations and imaging to support clinical decision-making.
B3	Manage ophthalmic emergencies and acute vision-threatening conditions effectively.
B4	Counsel patients appropriately and coordinate care with other medical specialties when required.

Professional and Practical Skills **(C)**	
	Upon successful completion of the postgraduate MD in Ophthalmology Program, the graduates will be able to:
C1	Design and conduct ethically sound research projects in ophthalmology.
C2	Collect, analyze, and interpret research data using appropriate statistical tools.
C3	Communicate scientific findings through publications, presentations, and successful defense of a doctoral thesis.
C4	Translate basic and clinical research findings into practical ophthalmic applications.

General Skills (D)	
	Upon successful completion of the postgraduate MD in Ophthalmology Program, the graduates will be able to:
D1	Communicate effectively and professionally with patients, colleagues, and multidisciplinary healthcare teams.
D2	Present clinical cases and scientific work clearly in academic and professional settings.
D3	Demonstrate ethical conduct, legal compliance, and accurate clinical documentation.
D4	Exhibit leadership, teamwork, and commitment to continuous professional development in ophthalmic practice.

Program Structure:

Requirements	No. of Courses	Credit Hours	Rational Weight %
Supplementary courses	-	-	-
Core Courses	27	70	52.5%
Elective Courses	-	-	0%
Clinical training	Continue	41	26.2%
Thesis	1	30	21.3%
Total:		141	%100

Study Plan

	Course Title	Code/ no.	Credit Hours				Total study days	Total C.H.	Pre-Requisites
			Theoretical	clinical	Operative	Total C.H			
Part 1									
Semester 1									
1	Anatomy & Physiology of the Eye	OPH101	4	0	0	4			None
2	Principles of Optics & Refraction	OPH102	3	0	0	3			None
3	General Medical Ophthalmology	OPH103	3	0	0	3			None
4	Ocular Pharmacology	OPH104	2	0	0	2			None
5	Research Methodology	OPH105	3	0	0	3			None
Total credit hours			**15**	**0**	**0**	**15**			
Semester 2									
1	Ocular Pathology & Immunology	OPH106	3	0	0	3			OPH101
2	Basic Surgical Skills in Ophthalmology	OPH107	2	3	4	4			OPH101
3	Diagnostic Techniques in Ophthalmology	OPH108	3	3	0	4			OPH102
4	Research Proposal Development	OPH109	3	0	0	3			OPH105
Total credit hours			**11**	**6**	**4**	**14**			
Semester 3 (Clinical Training)									
1	Outpatient & Refraction Clinics	OPH201	0	9	0	3			
2	Medical Retina	OPH202	0	9	0	3			
3	Minor Surgical Procedures	OPH203	0	6	8	4			
Total Clinical hours			**0**	**24**	**8**	**10**			
Semester 4 (Clinical Training)									

	Course Title	Code/ no.	Credit Hours				Total study days	Total C.H.	Pre-Requisites
			Theoretical	clinical	Operative	Total C.H			
1	Cataract & Glaucoma Units	OPH204	0	12	12	7			OPH203
Total Clinical hours			0	12	12	7			
Semester 5									
1	Advanced Cataract Surgery	OPH205	3	6	12	8			OPH204
2	Research Dissertation (Part 1)	OPH206	6	0	0	6			OPH109
3	Pediatric Ophthalmology	OPH207	3	3	0	4			OPH106
4	Neuro-Ophthalmology	OPH208	3	3	0	4			OPH106
5	Glaucoma Surgery	OPH209	2	3	4	4			OPH204
6	Corneal Diseases and Surgery	OPH210	2	3	4	4			OPH204
7	Oculoplastics and Orbital Surgery	OPH211	2	3	4	4			OPH107
8	Uveitis and Systemic Disease	OPH212	2	0	0	2			OPH103
Total credit hours			**23**	**21**	**24**	**36**			
Part 2									
Semester 6 (Clinical Training)									
1	Retina & Vitreous Surgery Unit	OPH301	0	12	16	8			OPH202, OPH205
Total Clinical hours			**0**	**12**	**16**	**8**			
Semester 7									
1	Advanced Ophthalmic Research	OPH302	3	0	0	3			OPH206
2	Case Presentations & Clinical Decision	OPH303	2	0	0	2			OPH208

Course Title		Code/ no.	Credit Hours				Total study days	Total C.H.	Pre-Requisites
			Theoretical	clinical	Operative	Total C.H			
Total credit hours			5	0	0	5			
Semester 8 (Clinical Training)									
1	Surgical Rotation – Subspecialties	OPH304	0	12	16	8			OPH211
Total Clinical hours			0	12	16	8			
Semester 9 (Clinical Training)									
1	Advanced Surgical Management & Innovations	OPH305	0	12	16	8			OPH304
Total Clinical hours			0	12	16	8			
Semester 10									
1	Final Dissertation Submission	OPH306	30	0	0	30			OPH302
Total credit hours			30	0	0	30			
إجمالي الساعات المعتمدة			84	99	96	141			

Matrix of Mapping Program PILO's with Courses

Courses	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	B8	B10	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	D1	D2	D3	D4	D5	D6	D7	D8
Anatomy & Physiology of the Eye	✔	✔		✔					✔																													
Principles of Optics & Refraction	✔				✔				✔	✔													✔															
General Medical Ophthalmology	✔		✔						✔													✔															
Ocular Pharmacology	✔		✔	✔					✔	✔	✔	✔	✔						✔	✔	✔		✔														
Research Methodology	✔								✔													✔															
Ocular Pathology & Immunology	✔	✔			✔	✔			✔	✔	✔								✔		✔	✔	✔														
Basic Surgical Skills in Ophthalmology			✔	✔				✔	✔	✔		✔	✔			✔	✔		✔	✔			✔	✔	✔		✔	✔	✔				✔	✔		✔	✔
Diagnostic Techniques in Ophthalmology		✔		✔					✔	✔		✔		✔										✔		✔					✔	✔			✔			
Research Proposal Development				✔			✔	✔	✔	✔		✔		✔	✔	✔			✔					✔						✔	✔				✔			
Outpatient & Refraction Clinics											✔	✔		✔		✔	✔	✔	✔		✔	✔		✔		✔		✔		✔	✔		✔	✔	✔		✔	✔
Medical Retina	✔				✔				✔		✔	✔	✔	✔									✔			✔	✔					✔					
Minor Surgical Procedures									✔	✔	✔	✔		✔	✔		✔	✔						✔		✔	✔		✔	✔		✔		✔	✔		✔	
Cataract & Glaucoma Units					✔	✔				✔				✔				✔			✔	✔		✔					✔				✔			✔		
Advanced Cataract Surgery							✔				✔	✔						✔	✔						✔					✔				✔				
Research Dissertation (Part 1)			✔	✔					✔						✔	✔				✔	✔		✔		✔	✔	✔		✔		✔	✔					

Courses	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	B8	B10	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	D1	D2	D3	D4	D5	D6	D7	D8
Pediatric Ophthalmology					✔							✔		✔		✔		✔			✔	✔						✔							✔			
Neuro-Ophthalmology								✔				✔		✔					✔					✔						✔		✔				✔	✔
Glaucoma Surgery				✔		✔		✔				✔			✔			✔				✔		✔									✔				
Corneal Diseases and Surgery					✔		✔			✔	✔			✔		✔			✔	✔					✔	✔			✔		✔				✔			✔
Oculoplastics and Orbital Surgery										✔			✔		✔		✔					✔				✔		✔					✔				✔	
Uveitis and Systemic Disease								✔	✔					✔				✔	✔		✔			✔						✔					✔			
Retina & Vitreous Surgery Unit									✔	✔	✔			✔		✔				✔			✔					✔		✔	✔							
Advanced Ophthalmic Research											✔			✔		✔			✔		✔		✔	✔				✔	✔				✔				✔	
Case Presentations & Clinical Decision											✔	✔		✔		✔	✔	✔	✔		✔	✔	✔		✔				✔		✔			✔		✔		
Surgical Rotation – Subspecialties											✔	✔		✔	✔			✔		✔	✔	✔		✔		✔		✔		✔	✔		✔	✔	✔		✔	✔
Advanced Surgical Management & Innovations					✔							✔		✔		✔		✔			✔	✔						✔							✔			
Final Dissertation Submission								✔				✔		✔					✔					✔						✔		✔					✔	✔

Teaching Strategy		
N	**Teaching Strategy**	**Description**
1	- Case-based discussions - 3D neuroanatomy visualizations - Audience response systems	Interactive Lectures
2	- Cadaver/synthetic model dissections - Suturing/hemostasis practice - Instrument handling	Clinical Skill Workshops
3	- Small group case analysis - Progressive disclosure format - Faculty-guided debriefs	Problem-Based Learning (PBL)
4	- High-fidelity mannequin scenarios - Virtual surgery simulators - Role-play exercises	Simulation Training
5	- Supervised OR assistances - ICU patient management - Outpatient clinics	Clinical Rotations

Assessment Strategy		
N	Assessment Strategy	Description
1	Written exams (MCQs + essays)	Basic Neuroscience Knowledge
2	OSCEs with: • Imaging interpretation (CT/MRI) • Neurological exams	Clinical Diagnostic Skills
3	• Supervised procedure logbook (min. 15 cases) • Cadaver lab evaluations	Surgical Skills Assessment
4	• Simulation scenarios (trauma, stroke) • Oral case defense	Emergency Case Management
5	• Thesis defense • Research paper submission	Research Competency
6	• 360° evaluations • Ethics case analysis	Professional Practice
7	• Tumor board participation • Team case presentations	Interdisciplinary Collaboration

Study methods and system in the program:
Study system: Integrated competency-based medical education
Study methods in the program: Lecture-based + Clinical practice)
Number of years needed for completion of the program: 5 years
Total credit hours required to award the degree: 141 credit Hours

Admission Requirements for the Program	
Requirement	**Details**
Required Specializations	Bachelor of Medicine and Surgery (MBBS) or an equivalent degree from a recognized university.
English Language Requirement	Good in English
Computer Skills (ICDL)	Good
Other Requirements	Submission of academic transcripts, letters of recommendation, and a personal statement.

Graduation Requirements:

1. Total Credit Hours Required:

- **Minimum Total: 141 Credit Hours**, including:
  - Required courses: 0 C.H.
  - Core Courses: 74 C.H.
  - Electives: 0 C.H.
  - Clinical: 37 C.H.
  - Thesis & Research: 30 C.H.

2- Minimum Passing Grades per Course

Course Type	Passing Grade	Grading Scale
Core Courses (Anatomy, Physiology, etc.)	**70%** (C+)	Excellent (90-100%), Very Good (80-89%), Good (70-79%), Fall (<70%)
Clinical Training Courses	**75%** (B)	Evaluated via OSCE (Objective Structured Clinical Exam)
Thesis Defense	**80%** (B+)	Assessed by committee (research quality, presentation, publication potential)

3. Cumulative Academic Requirements

Minimum CGPA: 70% (Good).

No Failures Allowed: Students must retake any failed course (max 2 attempts).

4. Clinical & Practical Competencies

Successful Completion of:

- **all required Hours** of supervised surgical procedures.

- **all Logbook Cases required.**

- **all Clinical Rotation required** (in the study plan).

5- Thesis & Research

Mandatory:

Submission of an **original research thesis** (30 credits).

Publication: At least 3 conference presentation or journal submission.

6. Professional Certification Requirement (End of Part I)

- **Mandatory:**
  - **Successful attainment of:**
    - IOFF Certification, and
    - FRSE Certification,
      as a basic and compulsory requirement for successful completion of Part I and progression in the program.

7. Additional Requirements

Licensing Examination: Passing the required national licensing examinations

Resource and equipment's needed for Program Implementations

To ensure successful delivery of the **MD-PhD in Ophthalmology** program, the following resources and equipment are required:

Learning Resources:

- Access to updated medical and scientific textbooks in ophthalmology and related fields
- Subscriptions to online academic databases and journals (e.g., PubMed, Scopus, Elsevier, Wiley)
- Digital libraries and e-learning platforms
- Case-based learning materials and clinical scenario simulators
- Access to national and international ophthalmology guidelines and protocols

Teaching Tools and Educational Materials:

- Multimedia-enabled lecture halls and smart classrooms
- Projectors, computers, and visual aids
- Clinical teaching models (e.g., eye models, surgical simulation tools)
- Video-based surgical demonstrations and interactive modules

- Access to ophthalmology software for diagnostics and treatment planning

Laboratories and Equipment:

- Basic medical science laboratories (anatomy, physiology, pathology)
- Specialized ophthalmic laboratories with slit lamps, retinoscopes, tonometers
- Simulation labs for microsurgical training
- Vision research labs with imaging tools (OCT, ERG, Fundus camera, etc.)
- Wet labs for hands-on training in surgical procedures

Clinical Training Resources:

- The presence of an Ophthalmology Department at the university hospital designated for accreditation by the University.
- Contracting with a Magrabi Eye Center for the education and clinical training of students enrolled in the program.
- Affiliated teaching hospitals and specialized ophthalmology clinics
- Operation rooms equipped with microscopes and ophthalmic surgical instruments
- Access to real patient cases across ophthalmic subspecialties (retina, cornea, glaucoma, pediatric, etc.)
- Supervision and mentorship from experienced ophthalmologists and researchers.

Academic Staff:			
	Proof.	Associate Proof.	Asst Proof.
Needed Staff	**1**	**1**	**3**
Current Staff	**1**	**2**	**4**
Totes			

Program evaluation and improvement		
Targeted	**Assessment method**	**Sample**
students	**Course feedback surveys**	**All enrolled students**
Faculty Peer reviews,	**Peer reviews, academic audits**	**All teaching staff**
Alumni	**Graduate tracer studies**	**Selected graduates from past 3 years**
Employers	**Structured feedback forms/interviews**	**Hospitals, health institutions**
Curriculum Committee	**Annual program review meetings**	**Committee members**