طب وجراحة العيون

درجة الماجستير في طب وجراحة العيون

PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme Title & Code	Ophthalmology Master degree 500
(2) Final award/degree	Master degree
(3) Department (s)	Ophthalmology
(4) Course Coordinator	Prof.Dr Rasheed El-Lakkany Prof of Ophthalmology. Mans. Un.
(5) External evaluator (s)	Prof Dr Mervat Salah Prof of Ophthalmology, Ain Shams Un.
(6) Date of approval by the Department`s council	31/7/2016
(7) Date of last approval of programme specification by Faculty council	9-8-2016

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows: (either to be written in items or as a paragraph)

1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.

2- The programme will assess candidates understanding using the problem based learning questions in each module.

3- The programme will enable the candidate practical skills which required to achieve in their base hospital.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the programme, the candidate will be able to:

A- Knowledge and Understanding

A1	Describe the anatomy of the Eye
A2	Recognize updated data and researches concerning the eye, adnexae and nervous system specially in the field of microscopic and functional anatomy.
A3	Describe the Optics of the Eye
A4	Recognize updated data and researches including the application of physical, geometric and physiological optics to clinical management and an appreciation of the new principles of instrumentation and clinical practice in these areas.
A5	Recognize topics in general medicine& neuromedicine in relation to the eye :
A6	Recognize updated data and researches concerned general and neuro medicine in relation to the eye
A7	Recognize topics in General Surgery in relation to the eye
A8	Recognize updated data and researches concerned general surgery in relation to the eye
A9	Recognize topics of Ocular Pathology
A10	Recognize updated data and researches concerned Ocular Pathology .
A11	Recognize the topics of Ophthalmic Medicine.
A12	Recognize updated data and researches concerned Ophthalmic Medicine.
A13	Recognize different topics of Ophthalmic surgery
A14	Recognize updated data and researches concerned Ophthalmic surgery
A15	Show their recognition of basics of Microbiology and pathology.
A16	Recognize updated data and researches concerned the eye, adnexae and nervous system.
A17	Show their recognition of Physiology of the Eye
A18	Recognize updated data and researches concerned the physiology the eye, adnexae and nervous system.

2- Intellectual activities (I)

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

I1	Integrate microscopic and functional anatomy .
I2	Formulate a systematic approach for proper refeactive and optical corrective methods
I3	Integrate systemic & neurological disorders and their ocular impact.
I4	Integrate general surgical principles with ocular surgery
I5	predict the natural history of different ocular pathological issues.
I6	Integrate clinical findings in an ophthalmic diagnosis .
I7	formulate proper plan of treatment
I8	Integrate different procedures in management of ocular diseases.
I9	Integrate basic biomedical science with clinical care.
I10	understand the mechanism of vision, eye metabolism and their deviations

C- Professional/practical skills

P1	demonstrate their skills in **surgical anatomy and reconstructive surgeries**
P2	Perform retinoscopy
P3	Interpret topography
P4	Demonstrate their skills in diagnosing different ocular disorders associated with systemic and neurological diseases.
P5	Demonstrate their skills in **surgical emergencies**.
P6	Demonstrate their **skills plastic and reconstructive surgeries**
P7	Demonstrate their skills in **diagnosis of different pathological lesions.**
P8	Demonstrate their **skills in histopathological diagnosis**.
P9	Demonstrate their skills in **diagnosis of various ocular disorders**.
P10	show an ability to **implement different managegment plans for various ocular disorders**
P11	Demonstrate their skills in in management of ocular diseases
P12	Demonstrate their skills in prediction of the nature , severity and prognosis of various ocular disorders.
P13	Demonstrate their skills in **detection of normal ocular phenomena**

D- Communication & Transferable skills

T1	Demonstrate competence in data presentation. Statistical analysis and interpretation.
T2	Demonstrate key skills in the retrieval, preparation, analysis and interpretation of information from different sources.
T3	Make effective use of information technology e.g. web and internet. Database work
T4	Demonstrate self-direction and some originality in tackling and solving problems
T5	Work effectively both individually and in team and making appropriate use of the capacities of group members
T6	Communicate effectively, using the appropriate method with audiences of different levels of knowledge or experience.

(3) Academic standards:

Academic standards for the programme are attached in Appendix I. in which **NARS** issued by the National Authority for Quality Assurance & Accreditation in Education are used. External reference points/Benchmarks are attached in Appendix II.

External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the programme: (please list here the references and the website)

http://www.rcsed.ac.uk/site/389/default.aspx

http://www.icoph.org/refocusing_education/educational_programs/residency.html

(4) Curriculum structure and contents:

4.a- Duration of the programme (in years or months):…… 42 months

4.b- programme structure:

Candidates should fulfill a total of …45……credit hours

4.b.1: Number of credit hours:

First part:

٥ credit hours one semester 15 weeks.

Second part:

18 credit hours , threes semesters each 15 weeks.

Thesis:

6 credit hours.

Clinical training program:

14 credit hours

Scientific activities

2 credit hours

4.b.2: Teaching hours/week:

1st Part:

Lectures: 5 teaching hours per week

Clinical/lab 0 hour per week

Total:5 credit hours

2nd Part:

Lectures: 6 teaching hours per week

Total 6 credit hours in each of the three semesters .

(5) Programme courses:

	المقرر	Course	الكود	الساعات المتعمدة	
				المقرر	الإجمالي
الفصل الدراسي الأول	التشريح و النمو الجنيني للعين	Anatomy and Emberyology of the eye OPHT501	OPHT501	١	5
	فسيولوجيا العين	Physiology of the Eye OPHT503	OPHT503	١	
	مبادئ البصريات	Basic of Optics OPHT522 BO	OPHT522 BO	١	
	أمراض الباطنة	Basic of internal medicine related to the eye OPHT510	OPHT510	١	
	الأمراض العصبية المتعلقة بالعيون	Neurology related to the eye OPHT512	OPHT512		
	مبادئ الجراحةالعامة	Basic of surgery related to the eye OPHT520	OPHT520	١	
	الباثولوجيا العامة و الميكروبيولوجيا	Pathology and Microbiology OPHT 505& 507	OPHT 505& 507		
الفصل الدراسي					
	جراحة العين	Ophthalmic Surgery OPHT 522 OS	OPHT 522 OS	٦	

الثاني والثالث والرابع	طب العين	Ophthalmic Medicine OPHT 522 OM	OPHT 522 OM	٦	18
	باثولوجيا العين	Ocular Pathology OPHT 522 OP	OPHT 522 OP	٥	
		Ancillary diagnostic ophthalmic tests: 1- Retina 2- Orbit and adenexa 3- Cornea and refractive surgery	OPHT 522 OI & OPHT 522 CS & OPHT 522 EM	١	
كراسة الأنشطة	• برنامج التدريب الاكلينيكى والعملي في الجراحة				14
	• أنشطة علمية مختلفة				2
الرسالة	تبدأ مع بداية الفصل الدراسي الثاني وتستمر لمدة أربعة فصول				6
إجمالي الساعات المعتمدة					45

Second part

a. Compulsory courses

Course	Lectures	Clinical	Total teaching hours	
			lectures	Clinical
Ophthalmic Surgery OPHT 522 OS	6 Sems 3: 2 Sems 4: 2 Sems 5: 2	6 Sems 3: 2 Sems 4: 2 Sems 5: 2	Sems 3: 30hrs Sems 4: 30 hrs Sems 5: 30hrs Total: 90hrs	Sems 3: ٦٠hrs Sems 4: ٦٠hrs Sems 5: ٦٠hrs Total: ١٨0 hrs
Ophthalmic Medicine OPHT 522 OM	6 Sems 3: 2 Sems 4: 2 Sems 5: 2	6 Sems 3: 2 Sems 4: 2 Sems 5: 2	Sems 3: 30hrs Sems 4: 30 hrs Sems 5: 30hrs Total:	Sems 3: ٦0hrs Sems 4: ٦0hrs Sems 5: ٦0hrs Total: ١٨0hrs

			90hrs	
Ocular Pathology OPHT 522 OP	**5**	**2**		
	Sems 3: 2 Sems 4: 2 Sems 5: 1	Sems 3: - Sems 4: 1 Sems 5: 1	Sems 3: 30hrs Sems 4: 30 hrs Sems 5: 15hrs Total: 75hrs	Sems 3: - Sems 4: ٣٠hrs Sems 5: ٣٠hrs Total: ٦0 hrs
Elective Course	1 hour	-		
	Sems 3: - Sems 4: - Sems 5: 1	Sems 3: - Sems 4: - Sems 5: -	Sems 3: - Sems 4: - Sems 5: 15 hrs Total: 15 hrs	Sems 3: - Sems 4: - Sems 5: - Total: -

Programme-Courses ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

Course Title/Code	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14	a15	a16	a17	a18	i1	i2	i3	I4	I5	I6	I7	I8	I9	I10
Anatomy and Emberyology of the eye OPHT501	√	√																	√									
Physiology of the Eye OPHT503																	√	√										√
Pathology and Microbiology OPHT 505& 507															√	√											√	
Basic of Optics OPHT522 BO			√	√																√								
Basic of internal medicine related to the eye OPHT510					√	√															√							
Neurology related to the eye OPHT512																												
Basic of surgery related to the eye OPHT520							√	√														√						
Ophthalmic Medicine OPHT 522 OM											√	√												√	√			
Ophthalmic Surgery OPHT 522 OS													√	√												√		
Ocular pathology OPHT 522 OP									√	√													√					

Course Title/Code	p1	p2	p3	p4	P5	P6	P7	P8	P9	P10	P11	P12	P13	t1	t2	t3	T4	t5	t6
Anatomy and Emberyology of the eye OPHT501	√													√	√	√			
Physiology of the Eye OPHT503													√	√	√	√	√	√	√
Pathology and Microbiology OPHT 505& 507												√		√	√	√	√	√	√
Basic of Optics OPHT522 BO	√	√												√	√	√	√	√	√
Basic of internal medicine related to the eye OPHT510				√												√	√	√	√
Neurology related to the eye OPHT512																			
Basic of surgery related to the eye OPHT520					√	√								√	√	√	√	√	√
Ophthalmic Medicine OPHT 522 OM									√	√				√	√	√	√	√	√
Ophthalmic Surgery OPHT 522 OS											√			√	√	√	√	√	√
Ocular pathology OPHT 522 OP							√	√						√	√	√	√	√	√

(6) Programme admission requirements:

:

●General requirements:

By laws regulating post graduate Studies.

●Specific requirements :

N/A

(7) Regulations for progression and programme completion:

First part :

- **Minimally accepted attendance is 70%.**

Second part

1- Attendance Criteria:

- Minimally accepted attendance in each course is 7٠%.

2-Log book :

-The log should be fulfilled and signed by Head of the department.

3-Practical work:

-lab rotation according to the schedule determined by the supervisors

4- seminars:

-at least 2 seminars in topics determined by the supervisors must be prepared and presented by the candidate.

(8) Evaluation of Programme's intended learning outcomes (ILOs):

Assessment methods:

8.1: Written exam for assessment of knowledge and intellectual skills.

82: Clinical exam for assessment of intellectual and practical skills

8.3: Oral exam for assessment of knowledge and intellectual skills.

8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment schedule:

- MCQ exam at the end of each semster.
- Final exam at 6th month from admission to Master degree with total of 240 marks .

Percentage of each Assessment to the total mark:

نظام الامتحان وتوزيع الدرجات (ماجستير طب وجراحة العيون)

امتحان الجزء الأول

المقرر	الاختبار	الدرجة				إجمالي
		تحريري	MCQ	شفهي	إكلينيكي	
التشريح والنمو الجنيني للعين	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي	١٤٤	٣٦	١٢٠		٣٠٠
مبادئ البصريات	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي + اختبار عملي	١٤٤	٣٦	٦٠	٦٠	٣٠٠
فسيولوجيا العين	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي	١٤٤	٣٦	١٢٠		٣٠٠
مبادئ الجراحة العامة	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي + اختبار إكلينيكي	١٤٤	٣٦	٦٠	٦٠	٣٠٠
مبادئ الأمراض الباطنة	اختبار تحريري مدته ساعة ونصف + اختبار شفهي + اختبار اكلينيكي	٧٢	١٨	٣٠	٣٠	١٥٠
الأمراض العصبية المتعلقة بالعيون	اختبار تحريري مدته ساعة ونصف + اختبار شفهي + اختبار اكلينيكي	٧٢	١٨	٣٠	٣٠	١٥٠
الباثولوجيا العامة والميكروبيولوجيا	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي	١٤٤	٣٦	١٢٠		٣٠٠
	إجمالي الدرجة					١٨٠٠

الامتحان النهائي الشامل

المقرر	الاختبار	الدرجة					إجمالي
		تحريري	MCQ	شفهي	إكلينيكي	عملي	
طب العين	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي + اختبار إكلينيكي	١٦٠	٤٠	١٠٠	١٠٠		٤٠٠
جراحة العين	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي + اختبار عملي (عملية جراحية صغرى)	١٦٠	٤٠	١٠٠		١٠٠	٤٠٠
باثولوجيا العين	اختبار تحريري مدته ثلاث ساعات + اختبار شفهي + اختبار عملي	١٦٠	٤٠	١٠٠		١٠٠	٤٠٠
المقرر الاختياري	اختبار تحريري مدته نصف ساعة	١٦	٤				٢٠
	إجمالي الدرجة						١٢٢٠

Programme –Aims and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then aims of the programme are enlisted in first column, and an "√" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

Programme aims	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14
1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.	√	√	√	√	√	√	√	√	√	√	√	√	√	√
2- The programme will assess candidates understanding using the problem based learning questions in each module.		√	√	√	√	√	√	√	√	√		√	√	√
3- The programme will enable the candidate practical skills which required to achieve in their base hospital.														

Programme aims	A15	A16	A17	A18
1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.	√	√	√	√
2- The programme will assess candidates understanding using the problem based learning questions		√	√	√

in each module.				
3- The programme will enable the candidate practical skills which required to achieve in their base hospital.				

Programme aims										
	I1	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**
1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.	√	√	√	√	√	√	√	√	√	√
2- The programme will assess candidates understanding using the problem based learning questions in each module.		√	√	√	√	√	√	√	√	√
3- The programme will enable the candidate practical skills which required to achieve in their base hospital.										

Programme aims													
	P1	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11**	**P12**	**P13**
1-The programme will													

provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.													
2- The programme will assess candidates understanding using the problem based learning questions in each module.	√	√	√	√	√	√	√	√	√	√	√	√	√
3- The programme will enable the candidate practical skills which required to achieve in their base hospital.	√	√	√	√	√	√	√	√	√	√	√	√	√

Programme aims						
	T1	**T2**	**T3**	**T4**	**T5**	**T6**
1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.						
2- The programme will assess candidates understanding using the problem based learning questions in each module.						
3- The programme will enable the candidate practical skills which required to achieve in their base hospital.	√	√	√	√	√	√

programme-Methods of assessment ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the programme-Methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

programme-Methods of assessment	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14
8.1: Written exam for assessment of knowledge intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√	√
8.2: Clinical exam for assessment of intellectual and practical skills														
8.3: Oral exam for assessment of knowledge and intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√	√
8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√	√

programme-Methods of assessment	A15	A16	A17	A18
8.1: Written exam for assessment of knowledge intellectual skills.	√	√	√	√

8.2: Clinical exam for assessment of intellectual and practical skills				
8.3: Oral exam for assessment of knowledge and intellectual skills.	√	√	√	√
8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.	√	√	√	√

programme-Methods of assessment										
	I1	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**
8.1: Written exam for assessment of know and intellectual skills.										
82: Clinical exam for assessment of intellectual and practical skills	√	√	√	√	√	√	√	√	√	√
8.3: Oral exam for assessment of knowledge and intellectual skills.	√	√	√	√	√	√	√	√	√	√
8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.			√	√						

programme-Methods of assessment	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
8.1: Written exam for assessment of know and intellectual skills.											√	√	√
82: Clinical exam for assessment of intellectual and practical skills	√	√	√	√	√	√	√	√	√	√	√	√	√
8.3: Oral exam for assessment of knowledge and intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√
8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.			√	√									

programme-Methods of assessment	T1	T2	T3	T4	T5	T6
8.1: Written exam for assessment of know and intellectual skills.						
82: Clinical exam for assessment of intellectual and practical skills	√	√	√	√	√	√
8.3: Oral exam for assessment of knowledge and intellectual skills.	√	√	√	√	√	√
8.4 MCQ exam for continuous			√	√		

assessment of knowledge and intellectual skills.						

Evaluator	Tools*	Sample size
Internal evaluator **(s)**	**Prof Dr Hani Abdelrahman**	
External Evaluator **(s)**	**Prof Dr Mervat Salah**	

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme course coordinator: Prof.Dr Adel El layeh	Signature & date:

COURSE SPECIFICATION

(Anatomy and embryology of the Eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Master degree of Ophthalmology programme 1st part
(5) Date of approval by the Department`s council	**31/7/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Anatomy and Emberyology of the eye OPHT501
(8) Course code:	OPHT501
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Anatomy of the Eye also to provide the students with updated data and researches concerned the eye, adnexae and nervous system,

.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Describe the normal anatomy, embryologic development, physiology, and biochemistry of the crystalline lens.
A2	Describe the basic structure of the retina and its relationship to the vitreous and choroids.
A3	Describe the anatomy of the cornea& conjunctiva.
A4	Appraise the anatomy of iris &pupil.
A5	Define the anatomy of the vascular system .
A6	Describe the normal anatomy and function of orbital and periocular tissues.
A7	Outline the anatomy of the extraocular muscles and their fascia.
A8	Outline the anatomy of ciliary body & trabecular meshwork.
A9	Appraise the anatomy of the visual pathway in order to localize lesions

B- Intellectual skills

I1	Identify congenital anomalies of the lens.
I2	Summarize the developmental alterations that lead to structural changes of the cornea
I3	Correlate clinical and pathologic findings that differentiate intraocular tumors.
I4	Review anatomy of other cranial nerves.
I5	Correlate the physiology and neuro-anatomy of the pupil, cranial nerves, and the visual sensory and ocular motor pathways.
I6	**Interpret the most important anatomic land marks**
I7	Correlate the surgical anatomy of his clinical practice.
I8	Integrate the anatomy with other basic and clinical sciences.

(3) Course content:

Date	Title	Supervisor's signature	Teaching hours (15)
	Embryology& Development , Anatomy , Histology &Cytology.		**1**
	Outer coat : Cornea , Limbus. & Sclera.		**1**

	Middle coat : Choroid, Ciliary body& Iris.		1
	Inner coat : Retina.		1
	Contents : Lens & Vitreous.		1
	1. Eyelids & Eye brow. 2. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 3. Lacrimal gland. 4. Lacrimal puncta, canaliculi, sac. & Nasolacrimal duct. 5. Extra Ocular Muscles: *Recti & Oblique.* 6. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 7. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.		1 1 1 1 1 1 1
	4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital cortex, Blood supply.		2
	5) Autonomic nervous system : Sympathetic & Parasympathetic.		1

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!155&parId=3A011B8AD5F4955!111&authkey=!AKziwX0jTbY2tbE&app=PowerPoint

•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!158&parId=3A011B8AD5F4955!111&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!160&parId=3A011B8AD5F4955!111&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!437&parId=3A011B8AD5F4955!435&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!436&parId=3A011B8AD5F4955!435&authkey=!AKziwX0jTbY2tbE&app=PowerPoint •
https://www.youtube.com/watch?v=UszZoiODOUg
• https://www.youtube.com/watch?v=QNJpT3FPz30
• https://www.youtube.com/watch?v=mVuq_C3Bd6U
• https://www.youtube.com/watch?v=XsZWZiVGBk0
• https://www.youtube.com/watch?v=pnLqr1low-0
• https://www.youtube.com/watch?v=HmQeR3BfhcA
• https://www.youtube.com/watch?v=me9HVcJRb6g
• https://www.youtube.com/watch?v=PTFJMywpQK8
• https://www.youtube.com/watch?v=P38tj17D0pw
• https://www.youtube.com/watch?v=c42_HvO28yI
• https://www.youtube.com/watch?v=oBePFR1Jt1U

(5) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.

5.2: Oral examination

5.3: Practical examination

5.4 MCQ examination.

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: written after 6 month from master registration

Assessment 2 : Oral exam 6 month from master registration

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of the semester after 15 weeks

Assessment 4 Log book required activities to go through 1st part examination .

***Assessment 5*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:
Written exam: 180 Marks including 20% MCQ
Oral exam 120 Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 1st part exam.

(6) References of the course:

6.1: Text books:

- Anatomy And Physiology Of the eye ; MSO(Modern System Of Ophthalmology, 2018

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Anatomy And Physiology Of the eye ; MSO(Modern System Of Ophthalmology, 2018

(7) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9
Embryology& Development , Anatomy , Histology &Cytology.	√		√	√	√				
Inner coat : Retina.	√	√	√	√	√				
Contents : Lens & Vitreous.	√		√	√	√				
1. Eyelids & Eye brow. 2. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 3. Lacrimal gland. 4. Lacrimal puncta, canaliculi, sac. & Nasolacrimal duct. 5. Extra Ocular Muscles: *Recti & Oblique.* 6. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 7. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.	√		√	√	√	√	√		
4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital cortex, Blood supply.	√		√	√	√				√
5) Autonomic nervous system : Sympathetic & Parasympathetic.	√		√	√	√				
Outer coat : Cornea , Limbus. & Sclera.	√		√	√	√				
Middle coat : Choroid, Ciliary body& Iris.	√		√	√	√			√	

Subjects	I1	I2	I3	I4	I5	I6	I7	I8

Embryology& Development , Anatomy , Histology &Cytology.			√			√	√	√
Inner coat : Retina.			√			√	√	√
Contents : Lens & Vitreous.	√		√			√	√	√
1. Eyelids & Eye brow. 2. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 3. Lacrimal gland. 4. Lacrimal puncta, canaliculi, sac. & Nasolacrimal duct. 5. Extra Ocular Muscles: *Recti & Oblique.* 6. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 7. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.			√			√	√	√
4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital cortex, Blood supply.			√	√	√	√	√	√
5) Autonomic nervous system : Sympathetic & Parasympathetic.			√	√		√	√	√

Subjects	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**
Embryology& Development , Anatomy , Histology &Cytology.	√	√	√	√	√	√	√	√
Inner coat : Retina.	√	√	√	√	√	√	√	√
Outer coat : Cornea , Limbus. & Sclera.	√	√	√	√	√	√	√	√
Contents : Lens & Vitreous.								
Middle coat : Choroid, Ciliary body& Iris.	√	√	√	√	√	√	√	√
1. Eyelids & Eye brow. 2. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 3. Lacrimal gland. 4. Lacrimal puncta, canaliculi, sac. & Nasolacrimal duct. 5. Extra Ocular Muscles: *Recti & Oblique.* 6. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 7. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.	√	√	√	√	√	√	√	√
4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital	√	√	√	√	√	√	√	√

cortex, Blood supply.								
5) Autonomic nervous system : Sympathetic & Parasympathetic.	√	√	√	√	√	√	√	√
Outer coat : Cornea , Limbus. & Sclera.	√	√	√	√	√	√	√	√
Middle coat : Choroid, Ciliary body& Iris.	√	√	√	√	√	√	√	√

Course assessment method	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**A8**	**A9**
Written Examination	√	√	√	√	√	√	√	√	√
Oral Examination	√	√	√	√	√	√	√	√	√
Practical Examination			√	√		√			
MCQ Examination	√	√	√	√	√	√	√	√	√
Log Book activities									
seminars:			√	√		√	√	√	

Course assessment method	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**
Written Examination	√	√	√	√	√	√	√	√
Oral Examination	√	√	√	√	√	√	√	√
Practical Examination						√	√	
MCQ Examination	√	√	√	√	√	√	√	√
Log Book activities								
seminars:	√	√	√	√	√	√	√	√

Course assessment method	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**
Written			√	√				

Examination								
Oral Examination	√	√	√	√				
Practical Examination	√	√	√	√				
MCQ Examination			√	√	√			
Log Book activities	√							
seminars:	√	√	√	√		√	√	√

Course coordinator: : Prof. Dr Fathy Abd Elghany
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ancillary diagnostic ophthalmic tests in
CORNEA AND REFRACTIVE SURGERY)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second part.
(5) Date of approval by the Department`s council	**2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ancillary diagnostic ophthalmic tests in CORNEA AND REFRACTIVE SURGERY OPHT 522 CS
(8) Course code:	522 CS
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Integrate data from the history and the examination done.
P3	Ask for the proper investigations to be done for a given medical problem.
P4	Put a diagnosis and differential diagnosis of different cases.
P5	Identify patients needing hospitalization, and those needing surgical intervention.
P6	Identifying patients in need for higher specialization.
P7	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

(3) Course content:

Subjects	Lecture	Clinica	Laborato	Field	Total Teachi Hours
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	4				**15**
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	**4**				
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	**4**				

4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	**3**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online learning

(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.
5.2: MCQ for assessment of ILOs knowledge & intellectual.
5.3: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1 : Log book required activities to go through 2nd part examination .

Assessment 2: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment 3 the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written 20 marks)
Written exam: 100 %
Oral &practical exam 00 %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Refractive Surgery: American academy Of Opththalmology, BCSC, 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Refractive Surgery: American academy Of Opththalmology, BCSC, 2020-2021

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A1	A2	A3	A4	A5
1. ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
2. ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
4. ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√

Subjects	P1	P2	P3	P4	P5	P6	P7
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√

Subjects	T1	T2	T3	T4	T5
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√

Course assessment method	A1	A2	A3	A4	A5
Written Examination	√	√			√
MCQ Examination	√	√			√

Log Book activities					
seminars:	√	√	√	√	√

Course assessment method	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									
seminars:			√	√	√	√	√	√	

Course assessment method	**T1**	**T2**	**T3**	**T4**	**T5**
Written Examination					
MCQ Examination					
Log Book activities	√				
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Essam Badour
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ancillary diagnostic ophthalmic tests in
ORBIT AND ADENEXA)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second part.
(5) Date of approval by the Department`s council	**1/6/ 2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ancillary diagnostic ophthalmic tests in ORBIT AND ADENEXA OPHT 522 OA
(8) Course code:	522 OA
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Integrate data from the history and the examination done.
P3	Ask for the proper investigations to be done for a given medical problem.
P4	Put a diagnosis and differential diagnosis of different cases.
P5	Identify patients needing hospitalization, and those needing surgical intervention.
P6	Identifying patients in need for higher specialization.
P7	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

(3) Course content:

Subjects	Lecture	Clinica	Laborato	Field	Total Teachi Hours
1. **ROLE OF CT IN DIGNOSIS ORBITAL AND ADENEXAL DISORDERS**	**5**				**15**
2. **ROLE OF MRI IN DIGNOSIS OF ORBITAL AND ADENEXAL DISORDERS**	**5**				
3. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF ORBITAL AND ADENEXAL DISORDERS**	**5**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

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https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&id=3A011B8AD5F4955%21116&cid=03A011B8AD5F4955

(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.

5.2: MCQ for assessment of ILOs knowledge & intellectual.
5.3: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1 : Log book required activities to go through 2nd part examination .

Assessment 2: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment 3 the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written 20 marks)
Written exam: 100 %
Oral &practical exam 00 %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

Orbit, Eyelids and Lacrimal: American Academy Of Ophthalmology; BCSC, 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Orbit, Eyelids and Lacrimal: American Academy Of Ophthalmology; BCSC, 2020-2021

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department
- Lecture rooms: available in the department
-

Subjects	A1	I1	I2	I3	I4
1. **I**	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
3. **ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√

Subjects	P1	P2	P3	P4	P5	P6	P7
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√

Subjects	T1	T2	T3	T4	T5
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√

Course assessment method	A1	I1	I2	I3	I4
Written Examination	√	√			√
MCQ Examination	√	√			√
Log Book activities					

seminars:	√	√	√	√	√

Course assessment method	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									
seminars:			√	√	√	√	√	√	

Course assessment Method	**T1**	**T2**	**T3**	**T4**	**T5**
Written Examination					
MCQ Examination					
Log Book activities	√				
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Nader Roshdy
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ancillary diagnostic ophthalmic tests in RETINA)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second part.
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ancillary diagnostic ophthalmic tests in RETINA OPHT 522 RE
(8) Course code:	522 RE
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

II1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Integrate data from the history and the examination done.
P3	Ask for the proper investigations to be done for a given medical problem.
P4	Put a diagnosis and differential diagnosis of different cases.
P5	Identify patients needing hospitalization, and those needing surgical intervention.
P6	Identifying patients in need for higher specialization.
P7	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

(3) Course content:

Subjects	Lecture	Clinica	Laborato	Field	Total Teachi Hours
1. **ROLE OF FUNDUS FLUORESCINE ANGIOGRAM IN DIGNOSIS OF RETINAL DISORDERS**	5				**15**
2. **ROLE OPTICAL COHERENCE TOMOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS**	**5**				
3. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS**	**5**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning
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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.
5.2: MCQ for assessment of ILOs knowledge & intellectual.
5.3: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1 : Log book required activities to go through 2nd part examination .

Assessment 2: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment 3 the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written 20 marks)
Written exam: 100 %
Oral &practical exam 00 %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Retina and vitreous: American Academy of ophthalmology, BCSC 2020-2021
- Handbook Of Retinal OCT: by J S.Duker, 2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmology, Yanoff

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A1	I1	I2	I3	I4
1. ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
2. ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
4. ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND	√	√	√	√	√

REFRACTIVE SURGERY					

Subjects	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√

Subjects	**T1**	**T2**	**T3**	**T4**	**T5**
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√

Course assessment method	**A1**	**I1**	**I2**	**I3**	**I4**
Written Examination	√	√			√

MCQ Examination	√	√			√
Log Book activities					
seminars:	√	√	√	√	√

Course assessment method	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									
seminars:			√	√	√	√	√	√	

Course assessment method	**T1**	**T2**	**T3**	**T4**	**T5**
Written Examination					
MCQ Examination					
Log Book activities	√				
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Dalia Sabry
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby

Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(General medicine)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Master degree of Ophthalmology programme 1st part.
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Basic of internal medicine related to the eye OPHT 510
(8) Course code:	OPHT 510
(9) Credit hours	0.5
(10) Total teaching hours:	7.5 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about general medicine in relation to the eye also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize and describe ocular manifestations of systemic disease.
A2	Recognize and describe ocular manifestations of ocular toxicology of systemic medications
A3	Recognize the basis of critical role of Primary Care Physicians in preventing visual loss by appropriate treatment and referral.
A4	Discuss ophthalmic related health care system.
A5	Explain the management of the ophthalmic related health care system.

B- Intellectual skills

I1	Comment on ocular manifestations of systemic disease and ocular toxicology of systemic medications.
I2	Take a history and do a physical examination of the patient presenting with ocular symptoms.
I3	Manage the ophthalmic related health care system.
I4	To learn the critical role of Primary Care Physicians in preventing visual loss by appropriate treatment and referral.
I5	Comment on ocular manifestations of neurological disgorger.
I6	Take a history and do a physical examination of the patient presenting with neurological symptoms.
I7	Manage the ophthalmic related health care system.
I8	To learn the critical role of Primary Care Physicians in emergency by appropriate treatment and referral.
I9	Interpret the data answering the question where and what is the lesion

C- Professional/practical skills

P1	Record and read an electrocardiogram and blood indices.
P2	Analyze and interpret the ancillary testing as: i. Complete blood picture; ii. Liver and renal function; iii. Immunologic profile
P3	Read and interpret the CSF analysis.
P4	Interpret of ancillary testing as: i. Ct brain; ii. MRI; iii. Immunologic profile.

D- Communication & Transferable skills

T1	Maintain honesty and integrity in all interactions with teachers, colleagues and others with whom physicians must interact in their professional lives.
T2	Recognize the scope and limits of their role as students as well as the necessity to seek and apply collaboration with other workers.
T3	Work cooperatively and show respect for other opinions.
T4	Appraise responsibility towards work
T5	Maintain honesty and integrity in all interactions with teachers, colleagues and others with whom physicians must interact in their professional lives.

T6	Recognize the scope and limits of their role as students as well as the necessity to seek and apply collaboration with other workers.
T7	Work cooperatively and show respect for other opinions.
T8	Appraise responsibility towards work

(3) Course content:

	Title		Teaching Hours (7.5)
	Basics of internal medicine related to the eye		
	1. **Cardiovascular diseases:** Bacterial endocarditis, Hypertension – Arteriosclerosis Vascular diseases (Vasculitis: arterial, venous, capillary)		**2**
	2. **Endocrinal diseases:** Pituitary – Thyroid – Parathyroid – Suprarenal – Thymus		**2**
	3. **Diabetes Mellitus**		**2**
	4. **Uraemia**		**0.5**
	5. **6. Collagen diseases:** Rheumatoid arthitis, Systemic Lupus Erytheuratosus		**1**

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online learning

(4) Assessment methods:

5.1:Written Examination for assessment of knowledge and intellectual ILOs.

5.2: Structured Oral examination for assessment of knowledge and intellectual ILOs.

5.3: Objective Structured Clinical exam (OSCE) assessment knowledge; intellectual; clinical and communication ILOs.

5.4: MCQ for assessment of knowledge and intellectual ILOs.

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written after 6 month from master registration

Assessment 2 : Oral exam 6 month from master registration

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of the semester after 15 weeks

Assessment 4 Log book required activities to go through 1st part examination .

***Assessment 5*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 72 Marks + 18 marks MCQ.
Oral exam 30 MArks
Clinical 30Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 1st part exam.

(5) References of the course:

6.1: Text books:

- Medical ophthalmology text book, Kanaski , 2018

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Medical ophthalmology text books, Kanaski,2018

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course coordinator: : Prof. Dr Ayman Elmenesy
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(neurology)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Master degree of Ophthalmology programme 1st part.
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	**Neurology related to the eye**
(8) Course code:	OPHT512
(9) Credit hours	0.5
(10) Total teaching hours:	7.5 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about general medicine in relation to the eye also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize and describe ocular manifestations of systemic disease.
A2	Recognize and describe neurological manifestations of systemic disease.
A3	Discuss the basis of critical role of Primary Care Physicians in preventing visual loss by appropriate treatment and referral.
A4	Enlist ophthalmic symptoms and signs related to neurological disgorger.
A5	Describe the management of the ophthalmic related neurological disgorger.

B- Intellectual skills

I1	Comment on ocular manifestations of systemic disease and ocular toxicology of systemic medications.
I2	Take a history and do a physical examination of the patient presenting with ocular symptoms.
I3	Manage the ophthalmic related health care system.
I4	To learn the critical role of Primary Care Physicians in preventing visual loss by appropriate treatment and referral.
I5	Comment on ocular manifestations of neurological disgorger.
I6	Take a history and do a physical examination of the patient presenting with neurological symptoms.
I7	Manage the ophthalmic related health care system.
I8	To learn the critical role of Primary Care Physicians in emergency by appropriate treatment and referral.
I9	Interpret the data answering the question where and what is the lesion

C- Professional/practical skills

P1	Record and read an electrocardiogram and blood indices.
P2	Be familiar with the indications and interpretations of ancillary testing as: i. Complete blood picture; ii. Liver and renal function; iii. Immunologic profile
P3	Read and interpret the CSF analysis.
P4	Be familiar with the indications and interpretations of ancillary testing as: i. Ct brain; ii. MRI; iii. Immunologic profile.

D- Communication & Transferable skills

T1	Maintain honesty and integrity in all interactions with teachers, colleagues and others with whom physicians must interact in their professional lives.

T2	Recognize the scope and limits of their role as students as well as the necessity to seek and apply collaboration with other workers.
T3	Work cooperatively and show respect for other opinions.
T4	Appraise responsibility towards work
T5	Maintain honesty and integrity in all interactions with teachers, colleagues and others with whom physicians must interact in their professional lives.
T6	Recognize the scope and limits of their role as students as well as the necessity to seek and apply collaboration with other workers.
T7	Work cooperatively and show respect for other opinions.
T8	Appraise responsibility towards work

(3) Course content:

	Title		Teaching Hours (7.5)
	Neurology		
	5. Clinical neurological examination		**1.5**
	6. Cranial nerves 1-12		**1**
	7. Papilledema -Optic atrophy- Chiasmal lesions		**1**
	8. Paralytic squint- Ophthalmoloplegia		**0.5**
	9. Ptosis – lid retraction.		**0.5**
	10. Trigeminal neuralgia – hyperaesthesia – hypoaesthesia – anaesthesia		**0.5**
	11. Facial palsy - Blepharospasm		**0.5**
	12. Miosis – mydriasis - Anisocoria		**0.5**
	13. Nystagmus		**0.5**
	14. Pituitary tumours ,sellar and para sellar lesions		**0.5**
	15. Demyelinating diseases		**0.5**

(4) Teaching methods:

4.1: Lecture

4.2: Practical class

4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

(4) Assessment methods:

5.1:Written Examination for assessment of knowledge and intellectual ILOS.
5.2: Structured Oral examination for assessment of knowledge and intellectual ILOS.
5.3: Objective Structured Clinical Exam (OSCE) for assessment of knowledge; intellectual; clinical and communication ILOS.
5.4: MCQ for assessment of knowledge and intellectual ILOS.
5.5: Log book for activities for assessment of: mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.
5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written after 6 month from master registration

Assessment 2 : Oral exam 6 month from master registration

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of the semester after 15 weeks

Assessment 4 Log book required activities to go through 1st part examination .

***Assessment 5*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: **72 Marks + 18 MCQ**
Oral exam **30 Marks**
Clinical **30 Marks**

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 1st part exam.

(5) References of the course:

6.1: Text books:

- Medical ophthalmology text book, Kanaski,2017

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Medical ophthalmology text books, Kanaski,2017

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course coordinator: : Prof. Dr Tamer Belal
Head of the department: Prof. Dr Hesham Elsorogy.
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Optics of the Eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Master degree of Ophthalmology programme 1st part.
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Basic of Optics OPHT522 BO
(8) Course code:	OPHT522 BO
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Optics of the Eye also to provide the students with updated data and researches concerned the eye, 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.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Define the theory and terminology of physical optics.
A2	Recognize the clinical and technical relevance of such optical phenomena as interference, coherence, polarization, diffraction, and scattering.
A3	Explain the basic properties of laser light.
A4	Outline the principles of light propagation and image formation and some properties as refraction, reflection, magnification, and vergence.
A5	Label optical models of the human eye and how to apply them.
A6	Discuss the various types of visual perception and function, including visual acuity, brightness sensitivity, color perception, and contrast sensitivity.
A7	List the indications for prescribing bifocals and common difficulties encountered in their use.
A8	Recognize the optical principles underlying various modalities in refractive correction: spectacles, contact lenses, intraocular lenses, and refractive surgery.
A9	Recognize the basic methods of calculating intraocular powers and the advantages and disadvantages of the different methods.

B- Intellectual skills

I1	State the steps for performing streak Retinoscopy.
I2	Summarize the steps for performing a manifest refraction using a phoropter or trial lenses.
I3	Describe the use of the Jackson cross cylinder.
I4	Describe the indications for prescribing bifocals and common difficulties encountered in their use.
I5	Review the materials and fitting parameters of both soft and rigid contact lenses.
I6	Explain the optical principles underlying various modalities in refractive correction: spectacles, contact lenses, intraocular lenses, and refractive surgery.
I7	Discuss the basic methods of calculating intraocular powers and the advantages and disadvantages of the different methods.

I8	Describe the conceptual basis of multifocal IOLs and how the correction of presbyopia differs between these IOLs and spectacles.

C- Professional/practical skills

P1	Recognize optical models of the human eye and how to apply them.
P2	Describe how principles of light can be applied diagnostically and therapeutically.
P3	Recognize types of refractive correction and how to apply them most appropriately to the individual patient.
P4	Recognize the visual needs of low vision patients and how to address these needs through optical and non optical devices and/or appropriate referral.
P5	Recognize the operating principles of various optical instruments in order to use them more effectively.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1. **Physical**	**1**				**15**
○ Nature of light, properties of light					
2. **Geometric**	**5**				
○ Reflection: plane, spherical mirrors					
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses					
○ Toric refraction by the eye (Schematic, reduced eye)					
3. **Clinical**	**3**				
○ Aberrations					
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia					

○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis					
○ Binocular Muscle Coordination: convergence					
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia					
○ Convergence: excess, insufficiency					
○ Visual acuity: far , Near, measurement					
○ Retinoscopy:					
○ Ophthalmoscopy: Direct, indirect					
○ Verification of refraction					
4. **Appliances:** ○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids 5. **Instruments:** ○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic	4				
○ LASER	**2**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshop
4.7: Online Learning
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https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!161&parId=3A011B8AD5F4955!107&authkey=!AKziwX0jTbY2tbE&app=PowerPoint

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https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!169&parId=3A011B8AD5F4955!107&authkey=!AKziwX0jTbY2tbE&app=PowerPoint&wdo=1
https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!169&parId=3A011B8AD5F4955!107&authkey=!AKziwX0jTbY2tbE&app=PowerPoint&wdo=1
https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!166&parId=3A011B8AD5F4955!107&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
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https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&cid=03A011B8AD5F4955&id=3A011B8AD5F4955%21580&parId=3A011B8AD5F4955%21579&o=OneUp
https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&cid=03A011B8AD5F4955&id=3A011B8AD5F4955%21582&parId=3A011B8AD5F4955%21579&o=OneUp
https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&cid=03A011B8AD5F4955&id=3A011B8AD5F4955%21583&parId=3A011B8AD5F4955%21579&o=OneUp
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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.

5.2: Oral examination for assessment of ILOs knowledge & intellectual.
5.3: MCQ for assessment of ILOs number I20-I27

5.4: Practical examination for assessment of ILOs number C1,C2,C3, B1,B2,B3,B4,B6.

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.5: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written after 6 month from master registration

Assessment 2 : Oral exam 6 month from master registration

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of the semester after 15 weeks

Assessment 4 Log book required activities to go through 1st part examination .

***Assessment 5*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 180 Marks 60 %
Practical exam: 60 Marks 20 %
Oral exam: 60 MArks 20 %
Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 1ST part exam.

(5) References of the course:

6.1: Text books:

- Optics of the eye: by Elkington,

- Clinical Optics: American academy of ophthalmology, BCSC 2020-2021
- Modern Ophthalmic Optics, 2019 : by Jose A.Gomez ,

6.2: Websites:

- Mrcoph.org.uk

6.3: Recommended books

- Optics of the eye: by Elkington, Clinical Optics: American academy of ophthalmology, BCSC 2020-2021
- Modern Ophthalmic Optics, 2019 : by Jose A.Gomez

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9
1. **Physical**	√	√		√	√	√			
○ Nature of light, properties of light	√				√				
2. **Geometric**	√				√				
○ Reflection: plane, spherical mirrors	√				√				
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses	√				√				
○ Toric refraction by the eye (Schematic, reduced eye)	√				√				
3. **Clinical**	√				√				
○ Aberrations	√				√				
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia	√				√				
○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis	√				√				
○ Binocular Muscle	√				√				

Coordination: convergence									
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia	√				√				
○ Convergence: excess, insufficiency	√				√				
○ Visual acuity: far , Near, measurement	√				√				
○ Retinoscopy:	√				√				
○ Ophthalmoscopy: Direct, indirect	√				√				
○ Verification of refraction	√				√				
4. **Appliances:**	√				√				
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids	√				√		√	√	√
5. **Instruments:**	√				√				
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic	√				√				
○ LASER	√		√		√				

Subjects	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**
1. **Physical**								
○ Nature of light, properties of light								
2. **Geometric**								
○ Reflection: plane, spherical mirrors								
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses		√	√					
○ Toric refraction by the eye	√	√						

(Schematic, reduced eye)								
3. **Clinical**								
○ Aberrations		√						
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia		√						
○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis								
○ Binocular Muscle Coordination: convergence								
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia								
○ Convergence: excess, insufficiency								
○ Visual acuity: far , Near, measurement								
○ Retinoscopy:	√							
○ Ophthalmoscopy: Direct, indirect								
○ Verification of refraction		√	√					
4. **Appliances:**								
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids					√	√	√	√
5. **Instruments:**								
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic								
○ LASER								

Subjects	P1	P2	P3	P4	P5
1. **Physical**	√				
○ Nature of light, properties of light	√	√			
2. **Geometric**	√				
○ Reflection: plane, spherical mirrors	√				
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses	√		√		
○ Toric refraction by the eye (Schematic, reduced eye)	√				
3. **Clinical**	√				
○ Aberrations	√				
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia	√				
○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis	√				
○ Binocular Muscle Coordination: convergence	√				
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia	√				
○ Convergence: excess, insufficiency	√				
○ Visual acuity: far , Near, measurement	√				
○ Retinoscopy:	√				
○ Ophthalmoscopy: Direct, indirect	√				
○ Verification of refraction	√				

4. **Appliances:**	√				
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids	√		√	√	
5. **Instruments:**	√				
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic	√				√
○ LASER	√				

Subjects	T1	T2	T3	T4	T5	T6	T7	T8
1. **Physical**								√
○ Nature of light, properties of light								√
2. **Geometric**								√
○ Reflection: plane, spherical mirrors								√
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses		√						√
○ Toric refraction by the eye (Schematic, reduced eye)								√
3. **Clinical**								√
○ Aberrations								√
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia								√
○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis								√
○ Binocular Muscle								√

Coordination: convergence								
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia								√
○ Convergence: excess, insufficiency								√
○ Visual acuity: far , Near, measurement								√
○ Retinoscopy:	√							√
○ Ophthalmoscopy: Direct, indirect								√
○ Verification of refraction			√	√				√
4. **Appliances:**								√
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids					√	√	√	√
5. **Instruments:**								√
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic								√
○ LASER								√

Method of assessment	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**A8**	**A9**
Written Examination	√	√	√			√	√	√	
Oral Examination	√	√		√	√		√	√	
Practical Examination		√		√	√	√			
MCQ	√	√		√		√	√		√
Log book for activities									
seminars:		√	√		√	√		√	√

Method of assessment	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**
Written Examination		√	√		√		√	

Oral Examination		√	√		√			√
Practical Examination	√	√			√		√	
MCQ		√			√		√	√
Log book for activities								
seminars:		√		√	√			√

Method of assessment					
	P1	**P2**	**P3**	**P4**	**P5**
Written Examination	√	√	√	√	√
Oral Examination	√	√		√	
Practical Examination					
MCQ	√	√	√		√
Log book for activities					
seminars:	√		√	√	√

Course coordinator: : Prof. Dr Taher Gamal
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Basics of general Surgery related to the eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	First part
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Basic of surgery related to the eye OPHT520
(8) Course code:	OPHT520
(9) Credit hours	1/2
(10) Total teaching hours:	7.5 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about general General Surgery in relation to the eye also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Understand the surgical skills for basic procedures.
A2	Recognize medical and surgical emergencies and critical care conditions.
A3	Recognize systemic and ophthalmology related disorders.
A4	Investigative tools necessary for the diagnosis of the diseases.

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.
I5	Conduct ideal management of medical and surgical emergency states.
I6	Refine the surgical skills and performance to the state of the art.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Integrate data from the history and the examination done.
P3	Ask for the proper investigations to be done for a given medical problem.
P4	Put a diagnosis and differential diagnosis of different cases.
P5	Identify patients needing hospitalization, and those needing surgical intervention.
P6	Identifying patients in need for higher specialization.
P7	Diploma the different emergency and routine procedures necessary in the general specialty.

D- Communication & Transferable skills

T1	Maintain honesty and integrity in all interactions with teachers, colleagues and others with whom physicians must interact in their professional lives.
T2	Recognize the scope and limits of their role as students as well as the necessity to seek and apply collaboration with other workers.

T3	Work cooperatively and show respect for other opinions.
T4	Appraise responsibility towards work.

(3) Course content:

	Title		Teaching Hours (7.5)
	1. Disorders of surgical bleeding		**0.5**
	2. Surgical infection & antibiotics		**1**
	3. Shock		**1**
	4. Postoperative surgical complications		**0.5**
	5. Maxillary tumors		**0.5**
	6. Obstructive Jaundice		**0.5**
	7. Salivary gland disorders		**0.5**
	8. Thyroid gland		**1**
	9. Parathyroid gland		**0.5**
	10. Ulcers of the face		**0.5**
	11. Melanoma		**0.5**
	12. Burns		**0.5**

(4) Teaching methods:

4.1 : Lecture
4.2 : Practical class
4.3 : Small group discussion with case study and problem solving
4.4 : Tutorial
4.5 : Seminars
4.6 : Workshops
4.7 Online learning (Generel surgery department)

(4) Assessment methods:

5.1 : Written Examination for assessment of ILOs number A7, A8.

5.2 : Oral examination for assessment of ILOs number: A7, A8 ,T1,T2,T3,T4,T5,T6, I3,I5.

5.3 : Practical examination for assessment of ILOs number P1,P2,P3, I1,I2,I3,I4,I6.

5.3 : MCQ for assessment of ILOs number I 37 –I42

5.4 : Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.5 : seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written after 6 month from master registration

Assessment 2 : Oral exam 6 month from master registration

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of the semester after 15 weeks

Assessment 4 Log book required activities to go through 1st part examination .

***Assessment 5*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam:180 Marks(including 20% MCQ)
Oral exam 60 Marks
Clinical exam 60 Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 1st part exam.

(5) References of the course: 6.1: Text books:

- Baily and Love text book of surgery, 27th edition,2018
- Current diagnosis and treatment in surgery, 15th edition, 2020

6.2 : Websites:

- rcoph.org.uk

6.3 : Recommended books

Baily and Love text book of surgery, 27th edition,2018
Current diagnosis and treatment in surgery, 15th edition, 2020

(6) Facilities and resources mandatory for course completion:

▪ Lecture rooms: available in the department

Subjects	**A1**	**A2**	**A3**	**A4**
1. Disorders of surgical bleeding	√	√	√	√
2. Surgical infection & antibiotics	√		√	√
3. Shock		√	√	√
4. Thyroid gland			√	√
5. Ulcers of the face				√
6. Melanoma				√

Subjects	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**
1. Disorders of surgical bleeding	√	√		√	√	√
2. Surgical infection & antibiotics		√	√		√	
3. Shock		√		√	√	√
4. Thyroid gland	√	√	√		√	√
5. Ulcers of the face	√		√	√		√
6. Melanoma		√	√			

Subjects	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**
1. Disorders of surgical bleeding	√		√		√	√	√
2. Surgical infection & antibiotics	√	√		√			√
3. Shock	√	√	√		√		√
4. Thyroid gland	√		√		√	√	√
5. Ulcers of the face		√		√		√	
6. Melanoma	√		√			√	

Subjects	T1	T2	T3	T4
1. Disorders of surgical bleeding	√	√	√	
2. Surgical infection & antibiotics	√		√	√
3. Shock		√	√	
4. Thyroid gland	√		√	√
5. Ulcers of the face	√		√	
6. Melanoma		√		

Course assessment method	A1	A2	A3	A4
Written Examination	√	√	√	√
Oral Examination		√		√
Practical Examination				
MCQ Examination	√		√	√
Log Book activities				
seminars:		√		

Course assessment method	I1	I2	I3	I4	I5	I6
Written Examination	√		√	√		√
Oral Examination	√	√		√		√
Practical Examination		√				√
MCQ Examination			√	√	√	

Log Book activities	√					
seminars:	√	√	√	√		√

Course assessment method	**1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**
Written Examination				√			√
Oral Examination	√						√
Practical Examination	√	√	√	√	√	√	√
MCQ Examination			√	√	√		
Log Book activities							
seminars:					√	√	

Course assessment method	**T1**	**T2**	**T3**	**T4**
Written Examination				
Oral Examination	√			√
Practical Examination	√			
MCQ Examination				
Log Book activities	√			
seminars:	√	√	√	√

Course coordinator: : Prof. Dr Tamer Belal
Head of the department: Prof. Dr Hesham Elsorogy.
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine– Mansoura University

(A) Administrative information

(١) Programme offering the course:	Master degree of Ophthalmology programme
(٢) Department offering the programme:	Ophthalmology department
(٣) Department responsible for teaching the course:	OPhthalmology department
(٤) Part of the programme:	Second part.
(٥) Date of approval by the Department`s council	
(٦) Date of last approval of programme specification by Faculty council	
(٧) Course title:	Ocular Genetics OPHT ٥٢٢ OG
(٨) Course code:	٥٢٢ OG
(٩) Total teaching hours:	٢٢.٥ hours

(B) Professional information

(١) Course Aims:

The broad aim of the course is to educate students about Ocular Ocular genetics also to provide the students with updated data and researches.

(٢) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A٥٨	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

I٤٣	Specify medical dilemmas and complexities and how to solve them.
I٤٤	Make conclusions and be able to conduct scientific discussion.
I٤٥	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I٤٦	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P٢٧	Take a focused medical history with proper analysis and conclusions.
P٢٩	Integrate data from the history and the examination done.
P٣٠	Ask for the proper investigations to be done for a given medical problem.
P٣١	Put a diagnosis and differential diagnosis of different cases.
P٣٣	Identify patients needing hospitalization, and those needing surgical intervention.
P٣٤	Identifying patients in need for higher specialization.
P٣٦	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T٣٨	Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T٣٩	Diploma computer skills in research, data base filing and preparation of presentation.

T٤٠	Use computer efficiently in solving medical problems.
T٤١	Work in team.
T٤٢	Acquire managerial skills.

(٣) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
Gene therapy in macular disorders					٢٢.٥
Gene therapy in Glaucoma					
Other congenital ophthalmic disorders					

(٤) Teaching methods:

٤.١: Lecture

٤.٢: Practical class

٤.٣: Small group discussion with case study and problem solving

٤.٤: Tutorial

٤.٥: Seminars

٤.٦: Workshops

(٤) Assessment methods:

٥.١:Written Examination for assessment of ILOs number A٥٥,T٣٨,T٣٩,T٤٠,T٤١,٤٢,P٢٧, ٢٩,٣٠,٣١,٣٣,٣٤,٣٥,٣٦.

٥.٢: MCQ for assessment of ILOs number A٥٥,T٣٨,T٣٩,T٤٠,T٤١,٤٢,P٢٧, ٢٩,٣٠,٣١,٣٣,٣٤,٣٥,٣٦.

٥.٣: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

٥.٤: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment ١: Log book required activities to go through ٢nd part examination .

Assessment ٢: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment ٣ the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written ٢٠ marks)
Written exam: ١٠٠ **%**
Oral &practical exam ٠٠ **%**

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the ٢nd part exam.

(٥) References of the course:

٦.١: Text books:

- Ophthalmology, Yanoff

٦.٢: Websites:

- rcoph.org.uk

٦.٣: Recommended books

- Ophthalmology, Yanoff

(٧) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department
- Lecture rooms: available in the department
-

Subjects	٨٥٨	١٤٣	١٤٤	١٤٥	١٤٦
Gene therapy in macular disorders	√	√	√	√	√
Gene therapy in Glaucoma	√	√	√	√	√
Other congenital ophthalmic disorders	√	√	√	√	√

Subjects	٣٢٧	٣٢٩	٣٣٠	٣٣١	٣٣٢	٣٣٤	٣٣٦
Gene therapy in macular disorders	√	√	√	√	√	√	√
Gene therapy in Glaucoma	√	√	√	√	√	√	√
Other congenital ophthalmic disorders	√	√	√	√	√	√	√

Subjects	٣٣٨	٣٣٩	٣٤٠	٣٤١	٣٤٢
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.	√	√	√	√	√

Gene therapy in macular disorders	√	√	√	√	√
Gene therapy in Glaucoma	√	√	√	√	√

Course assessment method	٨٥٨	١٤٣	١٤٤	١٤٥	١٤٦
Written Examination	√	√			√
MCQ Examination	√	√			√
Log Book activities					
seminars:	√	√	√	√	√

Course assessment method	٣٢٧	٣٢٨	٣٢٩	٣٣٠	٣٣١	٣٣٢	٣٣٣	٣٣٤	٣٣٦
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									
seminars:			√	√	√	√	√	√	

Course assessment method	٣٣٨	٣٣٩	٣٤٠	٣٤١	٣٤٢
Written Examination					
MCQ Examination					
Log Book activities	√				
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Sami Aboelkhir

Head of the department: Prof. Dr Sami Aboelkhir

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine– Mansoura University

(A) Administrative information

(١) Programme offering the course:	Master degree of Ophthalmology programme
(٢) Department offering the programme:	Ophthalmology department
(٣) Department responsible for teaching the course:	OPhthalmology department
(٤) Part of the programme:	Second part.
(٥) Date of approval by the Department`s council	
(٦) Date of last approval of programme specification by Faculty council	
(٧) Course title:	Ocular Immunology OPHT ٥٢٢ OI

(٨) Course code:	٥٢٢ OI
(٩) Total teaching hours:	٢٢.٥ hours

(B) Professional information

(١) Course Aims:

The broad aim of the course is to educate students about ocular immunology also to provide the students with updated data and researches.

(٢) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A٥٨	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

I٤٣	Specify medical dilemmas and complexities and how to solve them.
I٤٤	Make conclusions and be able to conduct scientific discussion.
I٤٥	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I٤٦	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P٢٧	Take a focused medical history with proper analysis and conclusions.
P٢٩	Integrate data from the history and the examination done.
P٣٠	Ask for the proper investigations to be done for a given medical problem.
P٣١	Put a diagnosis and differential diagnosis of different cases.
P٣٣	Identify patients needing hospitalization, and those needing surgical intervention.
P٣٤	Identifying patients in need for higher specialization.
P٣٦	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T٣٨	Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T٣٩	Diploma computer skills in research, data base filing and preparation of presentation.
T٤٠	Use computer efficiently in solving medical problems.
T٤١	Work in team.
T٤٢	Acquire managerial skills.

(٣) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.					٢٢.٥
Hypersensitivity reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.					
Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroids,Non-steroidal anti-inflammatory drugs.					

(٤) Teaching methods:

٤.١: Lecture

٤.٢: Practical class

٤.٣: Small group discussion with case study and problem solving

٤.٤: Tutorial

٤.٥: Seminars

٤.٦: Workshops

(٤) Assessment methods:

٥.١:Written Examination for assessment of ILOs number A٥٥,T٣٨,T٣٩,T٤٠,T٤١,٤٢,P٢٧, ٢٩,٣٠,٣١,٣٣,٣٤,٣٥,٣٦.

٥.٢: MCQ for assessment of ILOs number A٥٥,T٣٨,T٣٩,T٤٠,T٤١,٤٢,P٢٧, ٢٩,٣٠,٣١,٣٣,٣٤,٣٥,٣٦.

٥.٣: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

٥.٤: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment ١: Log book required activities to go through ٢nd part examination .

Assessment ٢: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment ٣ the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written ٢٠ marks)
Written exam: ١٠٠ **%**

Oral &practical exam ٠٠ %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the ٢nd part exam.

(٥) References of the course:

٦.١: Text books:

- Ophthalmology, Yanoff

٦.٢: Websites:

- rcoph.org.uk

٦.٣: Recommended books

- Ophthalmology, Yanoff

(٦) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department
- Lecture rooms: available in the department
-

Subjects	٨٥٨	١٤٣	١٤٤	١٤٥	١٤٦
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.	√	√	√	√	√
Hypersensitivity reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.	√	√	√	√	√
Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroids,Non-steroidal anti-inflammatory drugs.	√	√	√	√	√

Subjects	٢٢٧	٢٢٩	٢٣٠	٢٣١	٢٣٢	٢٣٤	٢٣٦
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.	√	√	√	√	√	√	√
Hypersensitivity reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.	√	√	√	√	√	√	√
Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroids,Non-steroidal anti-inflammatory drugs.	√	√	√	√	√	√	√

Subjects	٢٣٨	٢٣٩	٢٤٠	٢٤١	٢٤٢
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.	√	√	√	√	√
Hypersensitivity reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.	√	√	√	√	√

Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroids,Non-steroidal anti-inflammatory drugs.	√	√	√	√	√

Course assessment method	A٥٨	I٤٣	I٤٤	I٤٥	I٤٦
Written Examination	√	√			√
MCQ Examination	√	√			√
Log Book activities					
seminars:	√	√	√	√	√

Course assessment method	P٣٧	P٣٨	P٣٩	P٣٠	P٣١	P٣٢	P٣٣	P٣٤	P٣٦
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									
seminars:			√	√	√	√	√	√	

Course assessment method	T٣٨	T٣٩	T٤٠	T٤١	T٤٢
Written Examination					
MCQ Examination					

Log Book activities	√				
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Sami Aboelkhir

Head of the department: Prof. Dr Sami Aboelkhir

COURSE SPECIFICATION

(Ocular Pathology)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second Part
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ocular pathology OPHT 522 OP
(8) Course code:	OPHT 522 OP
(9) Credit hours	9
(10) Total teaching hours:	75 hours lectures+ 60 clinical

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ocular Pathology also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize and define the basic pathologic processes that disturb the structure and function of the eye including cell injury, tissue response to injury (inflammation, healing and repair), neoplasia, infections and parasitic diseases.
A2	Recognize and describe Congenital anomalies of the eye and its adnexa.
A3	List the causes of common diseases affecting the eye.
A4	Understand the pathogenesis of common diseases affecting the eye.
A5	Recognize and describe the basic pathologic features (morphologic alterations) including the gross and microscopic pictures of various common diseases affecting the eye.
A6	Understand the basis of Injuries of the eye.
A7	Know pathology of primary and secondary ocular tumors.

B- Intellectual skills

I1	Comment on ocular pathological changes of eye structure in different diseases.
I2	Look at and evaluate any eye or biopsy that they have performed or assisted with.
I3	Interpret any pathological changes.
I4	Correlate macroscopic and microscopic pathological changes.

C- Professional/practical skills

P1	Prepare a proper pathology request (clinical history, location of biopsy, special requests).
P2	Prepare a concise, pertinent and accurate pathology report.
P3	The candidate should have knowledge of the value and the limitations of a pathology specimen and its report (e.g. inadequate biopsy, more or different tissue needed, biopsy not indicated), when to ask for another
P4	Integrate the pathology diagnosis into the complete care of the individual patient.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
Systemic Pathology:					**75+ 60**
(A) Adnexae:	**10**	8			
1. Eye lids: skin, glands, congenital, developmental, Aging, Inflammatory , Cysts, Vascular lesions, Benign tumours,					

Premalignant, malignant.					
2. Conjunctiva: Congenital , Vascular,Inflammatory (Acute, chronic) , allergic, Degenerations, cysts, tumours (Benign & malignant) , Xerosis.					
3. Orbit, lacrimal : Thyroid ophthalmopathy , Pseudotumour , Granuloma Tumours: lymphoid, vascular, muscular, lacrimal gland.					
(B) Ocular:					
1. **Cornea:** Congenital, Inflammatory, Ulcers, Pannus, keratoconus, Dystrophies.	5	8			
2. **Sclera:** Inflammatory.	**5**	8			
3. **Uvea:** Choroid,Ciliary body, Iris(Malignant,benign), Metastases Retinoblastoma & Leucocoria.	5	8			
4. **Lens:** Congenital Cataract , Intra Ocular Lens implantation.	5	8			
5. **Glaucomas**	**10**	4			
6. **Vitreous:** Posterior vitreous detachment , opacities & Haemorrhage.	**5**	4			
7. Macula: Holes, Dystrophies & Age related macular degeneration .	**5**	4			
8. **Retina :** Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies, Retinal pigment, degeneration , Retinal detachment	**15**	4			
9. **Optic nerve:** Congenital Anomalies , Papilloedema ,	10	4			

Optic neuritis , Optic atrophy &Tumours					

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.

5.2: Oral examination for assessment of ILOs knowledge & intellectual.
5.3: Practical examination for assessment of ILOs knowledge & intellectual.
5.4: MCQ for assessment of ILOs number I52- I 55

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 36 month from the start of the job

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of each semester.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:
written 200 mark and oral exam 100 mark and clinical with 100 marks
Written exam: 50%
Oral exam : 25%
Clinical : 25%

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Ocular Pathology: by Myron Yanoff, Eihth Edition, 2018
- Pathology of the Eye: American Academy Of Ophthalmology, BSCS: 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ocular Pathology: by Myron Yanoff, Eihth Edition, 2018
- Pathology of the Eye: American Academy Of Ophthalmology, BSCS: 2020-2021

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A1	A2	A3	A4	A5	A6	A7

Systemic Pathology:							
(A) Adnexae:							
1.Eye lids: skin, glands, congenital, developmental, Aging, Inflammatory , Cysts, Vascular lesions, Benign tumours, Premalignant, malignant.	√	√	√	√	√		
2.Conjunctiva: Congenital , Vascular,Inflammatory (Acute, chronic) , allergic, Degenerations, cysts, tumours (Benign & malignant) , Xerosis.	√	√	√	√	√		
3.Orbit, lacrimal : Thyroid ophthalmopathy , Pseudotumour , Granuloma Tumours: lymphoid, vascular, muscular, lacrimal gland.		√	√	√			
(B) Ocular:							
1.Cornea: Congenital, Inflammatory, Ulcers, Pannus, keratoconus, Dystrophies.		√	√	√	√		√
2.Sclera: Inflammatory.		√	√				
3.Uvea: Choroid,Ciliary body, Iris(Malignant,benign), Metastases Retinoblastoma & Leucocoria.		√	√	√	√		√
4.Lens: Congenital Cataract , Intra Ocular Lens implantation.		√	√				
5.Glaucomas		√	√	√			
6.Vitreous: Posterior vitreous detachment , opacities & Haemorrhage.		√		√			
7.Retina : Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies, Retinal pigment, degeneration , Retinal detachment		√	√	√	√	√	√
8.Macula: Holes, Dystrophies & Age related macular degeneration .		√	√			√	
9.Optic nerve: Congenital Anomalies , Papilloedema , Optic neuritis , Optic atrophy &Tumours		√	√		√	√	√

Subjects	I1	I2	I3	I4
Systemic Pathology:				
(A) Adnexae:				
1.Eye lids: skin, glands, congenital, developmental, Aging, Inflammatory , Cysts, Vascular lesions, Benign tumours, Premalignant, malignant.			√	√
2.Conjunctiva: Congenital , Vascular,Inflammatory (Acute, chronic) , allergic, Degenerations, cysts, tumours (Benign & malignant) , Xerosis.			√	√
3.Orbit, lacrimal : Thyroid ophthalmopathy , Pseudotumour , Granuloma Tumours: lymphoid, vascular, muscular, lacrimal gland.			√	√
(B) Ocular:				
1.Cornea: Congenital, Inflammatory, Ulcers, Pannus, keratoconus, Dystrophies.	√		√	√
2.Sclera: Inflammatory.			√	√
3.Uvea: Choroid,Ciliary body, Iris(Malignant,benign), Metastases Retinoblastoma & Leucocoria.			√	√
4.Lens: Congenital Cataract , Intra Ocular Lens implantation.			√	√
5.Glaucomas			√	√
6.Vitreous: Posterior vitreous detachment , opacities & Haemorrhage.			√	√
7.Retina : Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies, Retinal pigment, degeneration , Retinal detachment	√		√	√
8.Macula: Holes, Dystrophies & Age related macular degeneration .			√	√

9.Optic nerve: Congenital Anomalies , Papilloedema , Optic neuritis , Optic atrophy &Tumours	√	√	√	√	

Subjects	P1	P2	P3	P4	P5
Systemic Pathology:					
(A) Adnexae:					
1.Eye lids: skin, glands, congenital, developmental, Aging, Inflammatory , Cysts, Vascular lesions, Benign tumours, Premalignant, malignant.		√			√
2.Conjunctiva: Congenital , Vascular,Inflammatory (Acute, chronic) , allergic, Degenerations, cysts, tumours (Benign & malignant) , Xerosis.			√		√
3.Orbit, lacrimal : Thyroid ophthalmopathy , Pseudotumour , Granuloma Tumours: lymphoid, vascular, muscular, lacrimal gland.		√		√	
(B) Ocular:					
1.Cornea: Congenital, Inflammatory, Ulcers, Pannus, keratoconus, Dystrophies.		√	√		√
2.Sclera: Inflammatory.			√	√	√
3.Uvea: Choroid,Ciliary body, Iris(Malignant,benign), Metastases Retinoblastoma & Leucocoria.				√	√
4.Lens: Congenital Cataract , Intra Ocular Lens implantation.		√	√		√
5.Glaucomas		√	√		
6.Vitreous: Posterior vitreous detachment , opacities & Haemorrhage.			√	√	
7.Retina : Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies, Retinal pigment,		√		√	√

degeneration , Retinal detachment					
8.Macula: Holes, Dystrophies & Age related macular degeneration .		√		√	√
9.Optic nerve: Congenital Anomalies , Papilloedema , Optic neuritis , Optic atrophy &Tumours		√	√	√	√

Method of assessment	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**
Written Examination	√	√	√	√	√	√	√
Oral Examination	√	√	√	√	√	√	√
Practical Examination							
MCQ	√		√	√		√	√
Log book for activities							
seminars:	√	√		√	√		

Method of assessment	**I1**	**I2**	**I3**	**I4**
Written Examination	√		√	√
Oral Examination	√		√	√
Practical Examination		√		
MCQ	√		√	√
Log book for activities				
seminars:	√			√

Method of assessment	**P1**	**P2**	**P3**	**P4**
Written Examination				
Oral Examination				
Practical Examination	√	√	√	√
MCQ		√	√	
Log book for activities				
seminars:		√	√	

Course coordinator: : Prof. Dr Sahar Eltarshouby
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine– Mansoura University

(A) Administrative information

(١) Programme offering the course:	Master degree of Ophthalmology programme
(٢) Department offering the programme:	Ophthalmology department
(٣) Department responsible for teaching the course:	OPhthalmology department

(٤) Part of the programme:	Second part.
(٥) Date of approval by the Department`s council	
(٦) Date of last approval of programme specification by Faculty council	
(٧) Course title:	Ophthalmic Applications of NanotechnologyOPHT ٥٢٢ NT
(٨) Course code:	٥٢٢ NT
(٩) Total teaching hours:	٢٢.٥ hours

(B) Professional information

(١) Course Aims:

The broad aim of the course is to educate students about Ophthalmic applications of nanotechnology also to provide the students with updated data and researches.

(٢) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A٥٨	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

I٤٣	Specify medical dilemmas and complexities and how to solve them.
I٤٤	Make conclusions and be able to conduct scientific discussion.
I٤٥	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I٤٦	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P٢٧	Take a focused medical history with proper analysis and conclusions.
P٢٩	Integrate data from the history and the examination done.
P٣٠	Ask for the proper investigations to be done for a given medical problem.
P٣١	Put a diagnosis and differential diagnosis of different cases.
P٣٣	Identify patients needing hospitalization, and those needing surgical intervention.
P٣٤	Identifying patients in need for higher specialization.
P٣٦	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T٣٨	Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T٣٩	Diploma computer skills in research, data base filing and preparation of presentation.
T٤٠	Use computer efficiently in solving medical problems.
T٤١	Work in team.
T٤٢	Acquire managerial skills.

(٣) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
١. **NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY**, TOXICITY CONCERNS WITH NANOTECHNOLOGY					٢٢.٥
٢. **MANUFACTURING METHODS FOR NANOPARTICLES**					
٣. **NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE**					
٤. **NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS**					

(٤) Teaching methods:

٤.١: Lecture

٤.٢: Practical class

٤.٣: Small group discussion with case study and problem solving

٤.٤: Tutorial

٤.٥: Seminars

٤.٦: Workshops

(٤) Assessment methods:

٥.١:Written Examination for assessment of ILOs number A٥٥,T٣٨,T٣٩,T٤٠,T٤١,٤٢,P٢٧, ٢٩,٣٠,٣١,٣٣,٣٤,٣٥,٣٦.

٥.٢: MCQ for assessment of ILOs number A٥٥,T٣٨,T٣٩,T٤٠,T٤١,٤٢,P٢٧, ٢٩,٣٠,٣١,٣٣,٣٤,٣٥,٣٦.

٥.٣: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

٥.٤: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment ١ : Log book required activities to go through ٢nd part examination .

Assessment ٢: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment ٣ the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written ٢٠ marks)
Written exam: ١٠٠ %
Oral &practical exam ٠٠ %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the ٢nd part exam.

(٥) References of the course:

٦.١: Text books:

- Ophthalmology, Yanoff

٦.٢: Websites:

- rcoph.org.uk

٦.٣: **Recommended books**

- Ophthalmology, Yanoff

(٦) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A٥٨	I٤٣	I٤٤	I٤٥	I٤٦
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√

Subjects	P٢٧	P٢٩	P٣٠	P٣١	P٣٣	P٣٤	P٣٦
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√	√	√

Subjects	٣٣٨	٣٣٩	٣٤٠	٣٤١	٣٤٢
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√

Course assessment method	٨٥٨	١٤٣	١٤٤	١٤٥	١٤٦
Written Examination	√	√			√
MCQ Examination	√	√			√
Log Book activities					
seminars:	√	√	√	√	√

Course assessment	P٢٧	P٢٨	P٢٩	P٣٠	P٣١	P٣٢	P٣٣	P٣٤	P٣٦
Course assessment method	T٣٨	T٣٩	T٤٠	T٤١	T٤٢				
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									
seminars:	√		√	√	√	√	√	√	

Course coordinator: : Prof. Dr Sami Aboelkhir

Head of the department: Prof. Dr Sami Aboelkhir

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second part.
(5) Date of approval by the Department`s council	
(6) Date of last approval of programme specification by Faculty council	
(7) Course title:	Ophthalmic Applications of NanotechnologyOPHT 522 NT
(8) Course code:	522 NT
(9) Total teaching hours:	22.5 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic applications of nanotechnology also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A58	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

I43	Specify medical dilemmas and complexities and how to solve them.
I44	Make conclusions and be able to conduct scientific discussion.
I45	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I46	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P27	Take a focused medical history with proper analysis and conclusions.
P29	Integrate data from the history and the examination done.
P30	Ask for the proper investigations to be done for a given medical problem.
P31	Put a diagnosis and differential diagnosis of different cases.
P33	Identify patients needing hospitalization, and those needing surgical intervention.
P34	Identifying patients in need for higher specialization.
P36	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T38	Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T39	Diploma computer skills in research, data base filing and preparation of presentation.
T40	Use computer efficiently in solving medical problems.
T41	Work in team.
T42	Acquire managerial skills.

(3) Course content:

Subjects	Lecture	Clinica	Laborato	Field	Total Teachi Hours
1. **NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY**, TOXICITY CONCERNS WITH NANOTECHNOLOGY					**22.5**
2. **MANUFACTURING METHODS FOR NANOPARTICLES**					

3. **NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE**					
4. **NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS**					

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops

(4) Assessment methods:

5.1:Written Examination for assessment of ILOs number A55,T38,T39,T40,T41,42,P27, 29,30,31,33,34,35,36.

5.2: MCQ for assessment of ILOs number A55,T38,T39,T40,T41,42,P27, 29,30,31,33,34,35,36.

5.3: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1 : Log book required activities to go through 2nd part examination .

Assessment 2: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment 3 the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written 20 marks)
Written exam: 100 %
Oral &practical exam 00 %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Ophthalmology, Yanoff

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmology, Yanoff

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A58	I43	I44	I45	I46
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√

Subjects	P27	P29	P30	P31	P33	P34	P36
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√	√	√

Subjects	T38	T39	T40	T41	T42
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√

Course assessment method	A58	I43	I44	I45	I46
Written Examination	√	√			√
MCQ Examination	√	√			√
Log Book activities					
seminars:	√	√	√	√	√

Course assessment method	P27	P28	P29	P30	P31	P32	P33	P34	P36
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									
seminars:			√	√	√	√	√	√	

Course assessment method	T38	T39	T40	T41	T42
Written Examination					
MCQ Examination					
Log Book activities	√				
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Sami Aboelkhir

Head of the department*:* Prof. Dr Sami Aboelkhir

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second part.
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ophthalmic Medicine
(8) Course code:	OPHT 522 OM
(9) Total teaching hours:	90 hours lectures + 180 clinical

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize clinical diagnosis of diseases affecting the eye and the adenexa.
A2	Investigate tools necessary for the diagnosis of ophthalmic diseases.
A3	Identify surgical skills for basic ophthalmic procedures.
A4	Recognize medical emergencies and critical care in ophthalmology.
A5	List neurologic and ophthalmology related disorders.
A6	List ocular manifestation of systemic diseases.

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Examine properly and systematically the eye and the adenexa with an exact follow of the standard rules and interpret signs individually.
P3	Integrate data from the history and the examination done.
P4	Ask for the proper investigations to be done for a given medical problem.
P5	Put a diagnosis and differential diagnosis of different cases.
P6	Write a treatment prescription for a given medical problem within a multidisciplinary management plan if needed.
P7	Identify patients needing hospitalization, and those needing surgical intervention.
P8	Identifying patients in need for higher specialization.

	Diploma the different emergency and routine procedures necessary in the general ophthalmic specialty.
	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T1	Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T2	Diploma computer skills in research, data base filing and preparation of presentation.
T3	Use computer efficiently in solving medical problems.
T4	Work in team.
T5	Acquire managerial skills.

(3) Course content:

	Title		Total teaching hours	
			Lecture 90 h	Clinical 0 h81
			Module A	
	1. **Diseases of Eyelids :** Blepharitis, allergy- lid retraction- Madarosis- Blepharospasm- Infections		**8**	**61**
	2. **Diseases of lacrimal apparatus:** Dacryoadenitis- Dacryocystitis- canaliculitis		**4**	**8**
	3. **Diseases of Conjuctiva :** Conjunctivitis (Bacterial, Viral, Chlamydial, allergic)- Mucocutaneous disorders- Dry eye.		**6**	**61**
	4. **Diseases of Cornea :** Keratitis (Bacterial, Viral, Mycotic)- Pigmentations, Precipitates- Peripheral corneal disorders- Degeneration- Dystrophies- Ectasia.		**10**	**01**
	5. **Diseases of Sclera :** Scleritis- Episcleritis.		**2**	**4**

				Module B
	6. **Glaucomas:** Ocular hypertension- Primary Open angle glaucoma – Normo tensive glaucoma , Primary angle closure glaucoma – secondary Open angle glaucoma , secondary angle closure glaucoma , Infantile & Juvenile.		**10**	**12**
	7. **Disease of Uvea:** Uveitis (Infective, Non-infective, Chrornic)		**6**	**61**
	8. **Diseases of Macula:** age related macular degeneration , centrall serous chorio retinopathy , Cystoid macular oedema, Maculopathies.		**4**	**8**
	9. **Diseases of Retina:** Dystrophies (Receptors, Retinal pigment epithelium & Choroidal) Degenerations Vascular: Retinopathies (Diabetic, Hypertensive, Renal, Toxaemia, Arteriosclerotic), retinal artery occlusion & retinal vein occlusion		**10**	**12**
				Module C
	10. **Diseases of optic nerve:** Neuropathy, Neuritis, Papilledema, congenital.		**8**	**61**
	11. **Neuro-ophthalmology :** Pupillaryanomalies,Nystagmus,ophthal moplegias, Migraine, Brain stem syndromes, optic atrophy- chiasmal lesions.		**10**	**12**
	12. **Medical ophthalmology:** Metabolic (Diabetes- Gout)- Hypovitaminosis- Endocrinal (Pituitary- Thyroid- Parathyroid- Thymus)- Blood diseases- Collagen diseases (systemic luysus erythematous – rheumatic arthritis - Gaint cell arthritis)- Chronic granulomatous diseases (Tuberculosis , syphilis, Leprosy & Sarcoidosis)- Phacomatoses- Musculer diseases.		**12**	**14**

(4) Teaching methods: 4.1:

Lecture

4.2 : Practical class

4.3 : Small group discussion with case study and problem solving

4.4 : Tutorial

4.5 : Seminars

4.6 : Workshops

4.7: OnlineLearning

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(5)Assessment methods:

5.1 : Written Examination for assessment of ILOs knowledge &intellectual

5.2 : Structured Oral examination for assessment of ILOs knowledge & intellectual ILOs.

5.3 : MCQ for assessment of ILOs knowledge &intellectual

5.4 : OSCE examination for assessment of ILOs

5.5 : Log book for activities for assessment of: mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6 : seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 36 month from the start of the job

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written 200 mark, clinical 100 mark and oral exam with 100 marks)
Written exam: 02 %
Oral &practical exam 50 %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(4) References of the course: 6.1: Text books:

American Academy Of Ophthalmology, BCSC, 2020-2021
Kanski Clinical Ophthalmology: A systematic Approach,2019

6.2 : Websites:

- rcoph.org.uk

6.3 : Recommended books

American Academy Of Ophthalmology, BCSC, 2020-2021
Kanski Clinical Ophthalmology: A systematic Approach,2019

(5) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course coordinator: : Prof.Dr Hamza Abd Elhameed
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ophthalmic surgery)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second part
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ophthalmic SurgeryOPHT 522 OS
(8) Course code:	522 OS
(9) Total teaching hours:	90 hours lectures+ 180 clinical

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A63	Recognize an emergency-directed examination for patients with common ocular surgical emergencies.
A64	Identify problems, prioritize them, and generate a list of differential diagnosis for each problem.
A65	Select the most appropriate and cost-effective diagnostic and therapeutic procedure for each problem.
A66	Use the results of commonly used diagnostic procedures.
A67	Use the results of all the tests ordered to modify the problem list and the differential diagnosis accordingly.
A68	Recognize patients with vision threatening surgical conditions and perform appropriate initial therapy.
A69	Identify and outline management of patients with chronic ocular surgical conditions requiring long-term follow-up, rehabilitation and pain relief.

B- Intellectual skills

I47	Specify parts of the operating microscope and their use.
I48	Ask for the proper investigations to be done for a given medical problem.
I49	Put a diagnosis and differential diagnosis of different cases.
I50	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I51	Prioritize and tailor the different surgical guidelines to ocular situations.

C- Professional/practical skills

P37	Use operating microscope and their use; maintain appropriate levels of zoom, focus, illumination.
P38	Select appropriate hand instruments commonly used in anterior segment surgery.
P39	Integrate data from the history and the examination done.
P40	Competency in the handling of 10-0 nylon suture, including tying, trimming, and burying of knots.
P41	Creation of limbal stab incisions.
P42	Creation and interrupted suture closure of beveled corneo-scleral incisions.
P43	Perform corneal suture removal.
P44	Perform pterygium excision.
P45	close simple corneal lacerations without assistance and close complex corneal

	lacerations with or without some assistance

D- Communication & Transferable skills

T43	Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T44	Apply the principles of sterile techniques and infection control guidelines.
T45	Diploma computer skills in research, data base filing and preparation of presentation.
T46	Use computer efficiently in solving medical problems.
T47	Work in team.
T48	Acquire managerial skills

(3) Course content:

Date	Title	Supervisor's signature	Total teaching hours	
			Lectures 90 h	Clinical 180
	Module A: 3 credit hours		**30**	**60**
	1. **Sterilization - Aneasthesia.**		**2**	**0**
	2. **Eyelids:** Excision & Reconstruction (grafts). Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis, canthoplasty, tarsorrhaphy		**4**	**16**
	3. **Lacrimal gland:** Dacryo adenectomy.		**3**	**6**
	4. **Lacrimal Drainage System :** Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation		**3**	**4**
	5. **Conjunctiva :** Excision & reconstruction (Conjunctival Flap , graft .) pteygium.		**5**	**8**
	6. **Cornea:** Keratectomy-Keratoplasty-keratoprosthesis keratomileuses(Freeze-Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement		**7**	**10**

	).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera : graft , repair .			
	7. Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)		**6**	**16**
Module B 1.5 credit hours			**30**	**60**
	8. **Iris:** Iridectomy, Iridotomy. Iridoplasty, Excision.		**4**	**8**
	9. **Ciliary body :** cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)		**2**	**4**
	10. **Choroid :** choroidectomy .		**2**	**4**
	11. **Glaucoma :** .Ext. fixt.op- Implants& valves- Non penetrating op.		**10**	**20**
	12. **Retina:** Retinotomy, Retinoctomy, Retinopexy.		**6**	**12**
	13. **Vitreous:** Vitrectomy- Evisceration		**6**	**12**
Module c: 1.5 credit hours			**30**	**60**
	14. **Extra Ocular Muscles:** Recession, Resection, Transposition, Advancement		**8**	**16**
	15. **Orbit:** Orbitotomy- Reconstruction- Contracted socket- Enucleation		**6**	**12**
	16. **Trauma:** Contusion- Haemorrhage- Fracture- Foreign bodies- Chemical injuries.		**8**	**16**
	17. **LASER:** Cornea, Iris, Trabecular tissue, Ciliary. Body, Retina, Suture lysis-Sclerostomy- Capsulotomy- Phaco.		**8**	**16**

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online learning

(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.

5.2: Oral examination for assessment of ILOs knowledge & intellectual.
5.3: Practical examination for assessment of ILOs knowledge & intellectual.
5.4: MCQ for assessment of ILOs number I 43- I 46

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 36 month from the start of the job

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Percentage of each Assessment to the total mark:
(written 200 mark and oral exam 100 mark, practical with 100 marks)

Written exam: **50% (160 written + 40 MCQ)**

Oral &practical exam **50%(100 ORAL, 100 CLINICAL)**

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Basic Techniques Of ophthalmic surgery: by Jean RStaushnar, 2019
- Expert Techniques in Ophthalmic surgery: by Parul Ichhpujani: 2019

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmic surgery. Spaeth
- Basic Techniques Of ophthalmic surgery: by Jean RStaushnar, 2019
- Expert Techniques in Ophthalmic surgery: by Parul Ichhpujani: 2019

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content	A63	A64	A65	A66	A67	A68	A69
1.Sterilization - Aneasthesia.	√	√	√				
2.Eyelids: Excision & Reconstruction (grafts). Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis, canthoplasty, tarsorrhaphy	√	√	√	√	√	√	√
3.Lacrimal gland: Dacryo	√	√	√	√	√	√	√

adenectomy.							
4.Lacrimal Drainage System : Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation	√	√	√	√	√	√	√
5.Conjunctiva : Excision & reconstruction (Conjunctival Flap , graft .) pteygium.	√	√	√	√	√	√	√
6.Cornea: Keratectomy-Keratoplasty-keratoprosthesis keratomileuses(Freeze-Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera : graft , repair .	√	√	√	√	√	√	√
7.Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)	√	√	√	√	√	√	√
8.Iris: Iridectomy, Iridotomy. Iridoplasty, Excision.	√	√	√	√	√	√	√
9.Ciliary body : cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)	√	√	√	√	√	√	√
10.Choroid : choroidectomy .	√	√	√	√	√	√	√
11.Glaucoma : .Ext. fixt.op-Implants& valves- Non penetrating op.	√	√	√	√	√	√	√
12.Retina: Retinotomy, Retinoctomy, Retinopexy.	√	√	√	√	√	√	√
13.Vitreous: Vitrectomy- Evisceration	√	√	√	√	√	√	√
14.Extra Ocular Muscles: Recession, Resection, Transposition, Advancement	√	√	√	√	√	√	√
15.Orbit: Orbitotomy- Reconstruction-Contracted socket- Enucleation	√	√	√	√	√	√	√
16.Trauma: Contusion- Haemorrhage-Fracture- Foreign bodies- Chemical injuries.	√	√	√	√	√	√	√
17.LASER: Cornea, Iris, Trabecular tissue, Ciliary. Body, Retina, Suture lysis-Sclerostomy- Capsulotomy-Phaco.	√	√	√	√	√	√	√

Course content	**I47**	**I48**	**I49**	**I50**	**I51**
1.Sterilization - Aneasthesia.					
2.Eyelids: Excision & Reconstruction (grafts).	√	√	√	√	√

Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis, canthoplasty, tarsorrhaphy					
3.Lacrimal gland: Dacryo adenectomy.	√	√	√	√	√
4.Lacrimal Drainage System : Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation	√	√	√	√	√
5.Conjunctiva : Excision & reconstruction (Conjunctival Flap , graft .) pteygium.	√	√	√	√	√
6.Cornea: Keratectomy-Keratoplasty-keratoprosthesis keratomileuses(Freeze-Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera : graft , repair .	√	√	√	√	√
7.Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)	√	√	√	√	√
8.Iris: Iridectomy, Iridotomy. Iridoplasty, Excision.	√	√	√	√	√
9.Ciliary body : cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)	√	√	√	√	√
10.Choroid : choroidectomy .	√	√	√	√	√
11.Glaucoma : .Ext. fixt.op-Implants& valves- Non penetrating op.	√	√	√	√	√
12.Retina: Retinotomy, Retinoctomy, Retinopexy.	√	√	√	√	√
13.Vitreous: Vitrectomy- Evisceration	√	√	√	√	√
14.Extra Ocular Muscles: Recession, Resection, Transposition, Advancement	√	√	√	√	√
15.Orbit: Orbitotomy- Reconstruction-Contracted socket- Enucleation	√	√	√	√	√
16.Trauma: Contusion- Haemorrhage-Fracture- Foreign bodies- Chemical injuries.	√	√	√	√	√
17.LASER: Cornea, Iris, Trabecular tissue, Ciliary. Body, Retina, Suture lysis-Sclerostomy- Capsulotomy-Phaco.	√	√	√	√	√

Course content	P37	P38	P39	P40	P41	P42	P43	P44	P45
1.Sterilization - Aneasthesia.									
2.Eyelids: Excision & Reconstruction (grafts). Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis, canthoplasty, tarsorrhaphy	√	√	√						
3.Lacrimal gland: Dacryo adenectomy.	√	√	√						
4.Lacrimal Drainage System : Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation	√	√	√						
5.Conjunctiva : Excision & reconstruction (Conjunctival Flap , graft .) pteygium.	√	√	√	√	√	√	√	√	
6.Cornea: Keratectomy-Keratoplasty-keratoprosthesis keratomileuses(Freeze-Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera : graft , repair .	√	√	√	√	√	√	√	√	
7.Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)	√	√	√	√	√	√	√		
8.Iris: Iridectomy, Iridotomy. Iridoplasty, Excision.	√	√	√	√	√	√	√		
9.Ciliary body : cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)	√	√	√	√	√	√	√		
10.Choroid : choroidectomy .	√	√	√	√	√	√	√		
11.Glaucoma : .Ext. fixt.op-Implants& valves- Non penetrating op.	√	√	√	√	√	√	√		
12.Retina: Retinotomy, Retinoctomy, Retinopexy.	√	√	√	√	√	√	√		
13.Vitreous: Vitrectomy- Evisceration	√	√	√	√	√	√	√		
14.Extra Ocular Muscles: Recession, Resection, Transposition, Advancement	√	√	√						
15.Orbit: Orbitotomy- Reconstruction-Contracted socket- Enucleation	√	√	√						
16.Trauma: Contusion- Haemorrhage-Fracture- Foreign bodies- Chemical injuries.	√	√	√	√	√	√	√		√
17.LASER: Cornea, Iris, Trabecular			√						

tissue, Ciliary. Body, Retina, Suture lysis-Sclerostomy- Capsulotomy- Phaco.									

Course content	**T43**	**T44**	**T45**	**T46**	**T46**	**T48**
1.Sterilization - Aneasthesia.	√	√	√	√	√	√
2.Eyelids: Excision & Reconstruction (grafts). Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis, canthoplasty, tarsorrhaphy	√	√	√	√	√	√
3.Lacrimal gland: Dacryo adenectomy.	√	√	√	√	√	√
4.Lacrimal Drainage System : Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation	√	√	√	√	√	√
5.Conjunctiva : Excision & reconstruction (Conjunctival Flap , graft .) pteygium.	√	√	√	√	√	√
6.Cornea: Keratectomy- Keratoplasty-keratoprosthesis keratomileuses(Freeze-Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera : graft , repair .	√	√	√	√	√	√
7.Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)	√	√	√	√	√	√
8.Iris: Iridectomy, Iridotomy. Iridoplasty, Excision.	√	√	√	√	√	√
9.Ciliary body : cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)	√	√	√	√	√	√
10.Choroid : choroidectomy .	√	√	√	√	√	√
11.Glaucoma : .Ext. fixt.op- Implants& valves- Non penetrating op.	√	√	√	√	√	√
12.Retina: Retinotomy, Retinoctomy, Retinopexy.	√	√	√	√	√	√
13.Vitreous: Vitrectomy- Evisceration	√	√	√	√	√	√
14.Extra Ocular Muscles: Recession, Resection, Transposition, Advancement	√	√	√	√	√	√
15.Orbit: Orbitotomy- Reconstruction- Contracted socket- Enucleation	√	√	√	√	√	√

16.Trauma: Contusion- Haemorrhage- Fracture- Foreign bodies- Chemical injuries.	√	√	√	√	√	√
17.LASER: Cornea, Iris, Trabecular tissue, Ciliary. Body, Retina, Suture lysis-Sclerostomy- Capsulotomy- Phaco.	√	√	√	√	√	√

Method of assessment							
	A63	**A64**	**A65**	**A66**	**A67**	**A68**	**A69**
Written Examination	√	√	√	√	√	√	√
Oral Examination	√	√	√	√	√	√	√
Practical Examination	√	√	√	√	√	√	√
MCQ	√	√	√	√	√	√	√
Log book for activities							
seminars:	√	√	√	√	√	√	√

Method of assessment					
	I47	**I48**	**I49**	**I50**	**I51**
Written Examination	√	√	√	√	√
Oral Examination	√	√	√	√	√
Practical Examination	√	√	√	√	√
MCQ	√	√	√	√	√
Log book for activities	√				
seminars:	√	√	√	√	√

Method of assessment									
	P37	**P38**	**P39**	**P40**	**P41**	**P42**	**P43**	**P44**	**P45**
Written Examination									
Oral Examination									
Practical Examination	√	√	√	√	√	√	√		
MCQ									
Log book for activities									
seminars:									

Method of assessment						

	T43	T44	T45	T46	T47	T48
Written Examination		√				
Oral Examination	√	√				
Practical Examination	√	√			√	√
MCQ		√				
Log book for activities	√					
seminars:	√	√	√	√	√	√

Course coordinator: : Prof. Dr Ayman Abd Elghaffar
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Pathology and Microbiology of the Eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Master degree of Ophthalmology programme 1st part
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Pathology and Microbiology OPHT 505& 507
(8) Course code:	OPHT 505& 507
(9) Credit hours	1/2
(10) Total teaching hours:	7,5 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Microbiology and pathology of the Eye also to provide the students with updated data and researches concerned the eye,

.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Describe the disease transmission cycle.
A2	Describe Strategies to combat nosocomial infection.
A3	Recognize necessary vaccines for health care workers
A4	Recognize the steps of post exposure management (exposure to blood and infectious diseases.
A5	Recognize the notifiable infectious disease according to MOHP regulation.
A6	Know elements of standard precaution and transmission based precaution
A7	Show their recognition of : Anatomy of Bacterial cell: morphology &stain. Physiology and metabolism: Pathogenecity- Media- Resistance-Biochemical reaction. Microbial genetics Antimicrobial agents: Antibacterials- Antivirals- Antimycotics
A8	Describe: Gram positive Cocci: staphylococci- Streptococci- Pneumococci Gram negative Cocci: Gonococci Bacilli: Pseudomonas, Proteus, E.coli, Tetanus, Diphtheria, Tuberculosis , Koch Weeks, Marax Axenfeld. Chlamydia Spirochetes
A9	Recognize: • General characters of viruses, stains, media, Pathogenesis and control. • Orthovirus: Influenza • Paramyxovirus: Mumps, Measles • Herpes Virus: Herpes Simplex- Herpes Zoster- Cytomegalovirus- Adenovirus • Pox virus: vaccinia- Molluscum contagiosum • Onchogenic virus: Herpes Simplex 2 –Cyto Megalo virus & Papilloma-Epstein Barr virus. • Monilia, Actinomycosis, Nocardiosis, Mycetoma, Sporotrichosis, Blastomycosis, Cryptocociccosis, Aspergillosis, Histoplasmosis, coccidiodomycosis.
A10	Explain • Host- Parasite relationship • Immune response & Inflammatory cells • Hypersensitivity reactions I, II, III, IV • Transplantation immunity (corneal transplant) • Tumour Immunology.
A11	Identify major mechanisms involved in • **Inflammations:** Cells, Types : (acute, chronic), Causes: (Exogenous, endogenous). Pattern: granulonatous, exudative, suppurative .Organism: Bacteria, Fungi, Viruses, Protozoa Sequelue. • **Trauma.** • **Wound Healing** .

B- Intellectual skills

I1	Select the proper transmission based precaution on dealing with different infectious disease .
I2	Choose in a cost effective way the new and novel modalities used to reduce risk of

	health care associated infection (urinary cath, central venous catheters, etc…….).
I3	Do risk assessment of different medical interventions and choose the proper level of precautions (clean, aseptic, and surgical techniques)
I4	Choose proper disinfectant / antiseptics in different indications
I5	Identify, calculate and monitor different hospital acquired infections rates using provided tools
I6	Recognize and notify early outbreaks.

C- Professional/practical skills

P1	Recognize basic principle of infection control
P2	Able to apply aseptic technique

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
General Microbiology: - Antimicrobial agents & drug resistance: - Topical (ocular) antimicrobial drugs used for treatment of eye infections.	1				7,5
Immunology: - ***Basic immunology:*** Immune system & Types of immunity. Cells of the immune system and their functions. Antigens , Immunoglobulins and Cytokines. Immtmomodulation. ***Clinical immunology:*** Innate and adaptive immunity of the eye. Eye as an Immunologic privileged site .	1.5				

Hypersensitivity. • Eye allergy. ➢ Autoimmunity & autoimmune diseases affecting eye. ➢ Transplantation immunology: • Corneal immunogenicity and corneal transplantation					
Clinical Microbiology: ○ Normal flora of the eye. ○ Microbiological investigations and treatment of eye infections. ○ Mycobacterial and atypical mycobacterial infection ○ Ocular fugal infection ○ Ocular viral infection Chlamydia eye infection. **Nosocomial Infection and Infection Control** • Types of hospital-acquired infections • Organisms causing hospital-acquired infections • Infection control measures used to prevent nosocomial infection. • Sterilization and disinfection.	1				
General Pathology 1. Inflammation ▪ Definition ▪ Types ▪ For each type: a. pathogenesis b. Morphology c. Classification d. Outcome 2. Repair ▪ Types ▪ Factors affecting repair ▪ Complications ▪ Wound healing 3. Infection ▪ Toxemia ▪ Bacteremia ▪ Tuberculosis a. Pathogenesis b. Reactions c. Types d. T.B. of CNS ▪ Actinomycosis	1 1 0.5				

definition ▪ Sarcoidosis 4. Cell injury ▪ Concept of cell injury and adaptation ▪ Reversible cell injury ▪ Irreversible cell injury ▪ Amyloidosis ▪ Gout ▪ Pathological calcification ▪ Pathological pigmentation 5. Circulatory disturbances ▪ Edema ▪ Hemorrhage ▪ Shock ▪ Thrombosis ▪ Embolism ▪ Ischemia and infarction 6. Neoplasia ▪ Definition ▪ Classification ▪ Molecular pathogenesis ▪ Carcinogenic agents ▪ Laboratory diagnosis ▪ Clinical effects of tumors	0.5 0.5 0.5				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning
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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs number A15, A16

5.2: Oral examination for assessment of ILOs number: A15, A16 , ,T1,T2,T3,T4,T5,T6, I3,I5.

5.3: MCQ for assessment of ILOs number I1,I2,I3,I4,I6.

5.4: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.5: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written after 6 month from master registration

Assessment 2 : Oral exam 6 month from master registration

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of the semester after 15 weeks

Assessment 4 Log book required activities to go through 1st part examination .

Assessment 5**:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 180 Marks including 20% MCQ
Oral exam 120 Marks
Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 1st part exam.

(5) References of the course:

6.1: Text books:

- Microbiology text book : by microbiology department ,

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

Microbiology text book : by microbiology department ,

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
General Microbiology: - Antimicrobial agents & drug resistance: - Topical (ocular) antimicrobial drugs used for treatment of eye infections.							√	√			
Immunology: - ***Basic immunology:*** Immune system & Types of immunity. Cells of the immune system and their functions. Antigens , Immunoglobulins and Cytokines. Immtmomodulation.										√	
Clinical immunology: Innate and adaptive immunity of the eye. Eye as an Immunologic privileged site . Hypersensitivity. • Eye allergy. ➢ Autoimmunity & autoimmune diseases affecting eye. ➢ Transplantation immunology: • Corneal immunogenicity and corneal transplantation										√	
Clinical Microbiology: ○ Normal flora of the eye. ○ Microbiological investigations and treatment of eye infections. ○ Mycobacterial and atypical mycobacterial infection ○ Ocular fugal infection ○ Ocular viral infection Chlamydia eye infection.							√	√			

Nosocomial Infection and Infection Control • Types of hospital-acquired infections • Organisms causing hospital-acquired infections • Infection control measures used to prevent nosocomial infection. • Sterilization and disinfection.	√		√	√							
General Pathology 1. Inflammation ▪ Definition ▪ Types ▪ For each type: e. pathogenesis f. Morphology g. Classification Outcome										√	√
2. Repair ▪ Types ▪ Factors affecting repair ▪ Complications Wound healing.										√	√
3. Infection ▪ Toxemia ▪ Bacteremia ▪ Tuberculosis e. Pathogenesis f. Reactions g. Types h. T.B. of CNS ▪ Actinomycosis definition Sarcoidosis				√	√						
4. Cell injury ▪ Concept of cell injury and adaptation ▪ Reversible cell injury ▪ Irreversible cell injury ▪ Amyloidosis ▪ Gout ▪ Pathological calcification ▪ Pathological pigmentation											√

6. Neoplasia ▪ Definition ▪ Classification ▪ Molecular pathogenesis ▪ Carcinogenic agents ▪ Laboratory diagnosis ▪ Clinical effects of tumors										√	√

Subjects	I1	I2	I3	I4	I5	I6
General Microbiology: - Antimicrobial agents & drug resistance: - Topical (ocular) antimicrobial drugs used for treatment of eye infections.	√					
Immunology: - ***Basic immunology:*** Immune system & Types of immunity. Cells of the immune system and their functions. Antigens , Immunoglobulins and Cytokines. Immtmomodulation.						
Clinical immunology: Innate and adaptive immunity of the eye. Eye as an Immunologic privileged site . Hypersensitivity. • Eye allergy. ➢ Autoimmunity & autoimmune diseases affecting eye. ➢ Transplantation immunology: • Corneal immunogenicity and corneal transplantation						
Clinical Microbiology: ○ Normal flora of the eye. ○ Microbiological investigations and treatment of eye infections. ○ Mycobacterial and atypical mycobacterial infection ○ Ocular fugal infection ○ Ocular viral infection Chlamydia eye infection.						
Nosocomial Infection and Infection Control		√	√	√	√	

• Types of hospital-acquired infections • Organisms causing hospital-acquired infections • Infection control measures used to prevent nosocomial infection. • Sterilization and disinfection.						
General Pathology 1. Inflammation ▪ Definition ▪ Types ▪ For each type: h. pathogenesis i. Morphology j. Classification k. Outcome 2. Repair ▪ Types ▪ Factors affecting repair ▪ Complications ▪ Wound healing 3. Infection ▪ Toxemia ▪ Bacteremia ▪ Tuberculosis i. Pathogenesis j. Reactions k. Types l. T.B. of CNS ▪ Actinomycosis definition ▪ Sarcoidosis 4. Cell injury ▪ Concept of cell injury and adaptation ▪ Reversible cell injury ▪ Irreversible cell injury ▪ Amyloidosis ▪ Gout ▪ Pathological calcification ▪ Pathological pigmentation 6. Neoplasia ▪ Definition					√	√

▪ Classification ▪ Molecular pathogenesis ▪ Carcinogenic agents ▪ Laboratory diagnosis ▪ Clinical effects of tumors						

Subjects	P1	P2	P3	P4
General Microbiology: - Antimicrobial agents & drug resistance: - Topical (ocular) antimicrobial drugs used for treatment of eye infections.				
Immunology: - ***Basic immunology:*** Immune system & Types of immunity. Cells of the immune system and their functions. Antigens , Immunoglobulins and Cytokines. Immtmomodulation.				
Clinical immunology: Innate and adaptive immunity of the eye. Eye as an Immunologic privileged site . Hypersensitivity. ● Eye allergy. ➢ Autoimmunity & autoimmune diseases affecting eye. ➢ Transplantation immunology: ● Corneal immunogenicity and corneal transplantation				
Clinical Microbiology: ○ Normal flora of the eye. ○ Microbiological investigations and treatment of eye infections. ○ Mycobacterial and atypical mycobacterial infection ○ Ocular fugal infection ○ Ocular viral infection Chlamydia eye infection.				
Nosocomial Infection and Infection Control • Types of hospital-acquired infections • Organisms causing hospital-acquired infections • Infection control measures used to	√	√		

prevent nosocomial infection. • Sterilization and disinfection.				
General Pathology 1. Inflammation ▪ Definition ▪ Types ▪ For each type: l. pathogenesis m. Morphology n. Classification o. Outcome 2. Repair ▪ Types ▪ Factors affecting repair ▪ Complications ▪ Wound healing 3. Infection ▪ Toxemia ▪ Bacteremia ▪ Tuberculosis m. Pathogenesis n. Reactions o. Types p. T.B. of CNS ▪ Actinomycosis definition ▪ Sarcoidosis 4. Cell injury ▪ Concept of cell injury and adaptation ▪ Reversible cell injury ▪ Irreversible cell injury ▪ Amyloidosis ▪ Gout ▪ Pathological calcification ▪ Pathological pigmentation 6. Neoplasia ▪ Definition ▪ Classification ▪ Molecular pathogenesis ▪ Carcinogenic agents ▪ Laboratory diagnosis				

▪ Clinical effects of tumors				

Method of assessment	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11
Written Examination	√	√	√	√	√	√	√	√	√	√	
Oral Examination	√	√	√	√	√					√	
MCQ	√	√	√	√	√						√
Log book for activities											
seminars:	√	√	√	√	√			√			

Method of assessment	I1	I2	I3	I4	I5	I6
Written Examination	√	√		√		
Oral Examination		√	√	√		
MCQ	√		√	√	√	
Log book for activities						
seminars:	√		√		√	

Method of assessment	P1	P2	P3	P4
Written Examination	√	√		
Oral Examination	√	√		
MCQ	√	√		
Log book for activities				
seminars:			√	√

Course coordinator: : Prof. Dr Mohamed Abo Elela
Prof. Dr Amal Abd Elhafez
Head of the department: Prof.Dr Hesham Elsorogy
Head Of Quality Unit: Prof. Dr: Nesreen Mohamed Shalaby
Dean: Prof. Dr: Nesreen Salah Omar

COURSE SPECIFICATION
(Physiology of the Eye)
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	Ophthalmology department
(4) Part of the programme:	Master degree of Ophthalmology programme 1st part.
(5) Date of approval by the Department`s council	**1/6/ 2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Physiology of the Eye OPHT503
(8) Course code:	OPHT503
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Physiology of the Eye also to provide the students with updated data and researches concerned the eye, adnexae and nervous system, including related general physiology (its laws and phenomena). This extends to the organisation, 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).

.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize and describe Eyebrows, Eyelids, and Face: Structure and Function.
A2	Recognize and describe the lens and iris & pupil function.
A3	Recognize molecular basis of The Tear Film and factors affecting it
A4	Explain the basis of aqueous humor: Secretion and Dynamics and its effect on intraocular pressure.
A5	Discuss the physiologic basis of Ocular Circulation.
A6	Recognize the basics of Metabolism and Photochemistry of the Retina.
A7	Recognize physiologic basis of Colour Vision.
A8	Recognize physiologic basis of visual adaptation
A9	Recognize physiologic basis of Electrical Signals of the Retina and Visual Cortex.
A10	Recognize basis of Visual Function Testing.
A11	Explain the physiology of the Entoptic phenomena and after images.
A12	Explain physiology of Visual pathway Dysfunction.
A13	Explain d physiologic basis of binocular vision.
A14	Recognize and describe ocular motility.

B- Intellectual skills

I1	Comment on some clinical parameters such as: ERG, EOG, and VEP.
I2	Interpret the clinical situations resulting from physiological malfunction
I3	Interpret the variable methods for testing ocular functions.
I4	Integrate the physiology of the eye with other basic and clinical sciences.
I5	Choose the proper ocular therapy

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1. **Protective mechanism** : Eyelids Lacrimal apparatus Cornea.	1				**15**
2. **Ocular circulation** .	**0.5**				
3. **Aqueous humour :**formation, Criculation , Function , Drainage,	**1**				

4. **Intra Ocular Pressure .** : factors influencing, pharmacology, measurment.	**1**				
5. **Vitreous body.**	**0.5**				
6. **Iris & Pupil:** Reflexes: light, near, pharmacology.	**1**				
7. Lens & accommodation.	**1**				
8. Light ;(Nature ,properities), photochemistry of vision & adaptation:(light, dark)	0.5				
9. Colour vision, Theories, colour blindness	1				
10. Sensory response (clinical fusion frequency)	0.5				
11. Electrical phenomenon of the eye: **ERG ,EOG, VEP**	**1**				
12. Visual acuity	**1**				
13. Entoptic phenomenon	**1**				
14. Metabolism: cornea, lens &retina	**1**				
15. Extra ocular muscle, supra nuclear control, Nystagmus	1				
16. Binocular vision	**1**				
17. Visual field.	**1**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

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•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!147&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!148&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!149&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
•https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&cid=03A011B8AD5F4955&id=3A011B8AD5F4955%21150&parId=3A011B8AD5F4955%21110&o=OneUp
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•https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!154&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint

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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.

5.2: Oral examination for assessment of ILOs knowledge & intellectual.

5.3: MCQ examination for assessment of ILOs knowledge & intellectual.**5.4: Log book for activities for assessment of** : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.5: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: written after 6 month from master registration

Assessment 2 : Oral exam 6 month from master registration

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills at the end of the semester after 15 weeks

Assessment 4 Log book required activities to go through 1st part examination .

***Assessment 5*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 180 Marks including 20% MCQ
Oral exam 120 Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 1st part exam.

(5) References of the course:

- **6.1: Text books:**
- Adler 's Physiology Of the eye: By Leonard A Levin; Eleventh Edition
- Anatomy And Physiology of the Eye(MSO: Modern System Of Ophthalmology): by A K Khaurana

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Adler ‘s Physiology Of the eye: By Leonard A Levin; Eleventh Edition
- Anatomy And Physiology of the Eye(MSO: Modern System Of Ophthalmology): by A K Khaurana

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A13	A14
1.Protective mechanism : Eyelids Lacrimal apparatus Cornea.	√		√											
2.Ocular circulation .					√									
3.Aqueous humour :formation, Criculation , Function , Drainage,				√										
4.Intra Ocular Pressure . : factors influencing, pharmacology, measurment.				√										
5.Vitreous body.						√								
6.Iris & Pupil: Reflexes: light, near, pharmacology.		√												
7.Lens & accommodation.		√												
8.Light ;(Nature ,properities), photochemistry of vision & adaptation:(light, dark)						√								
9.Colour vision, Theories, colour blindness							√							
10.Sensory response (clinical fusion frequency)										√				
11.Electrical phenomenon of the eye: ERG ,EOG, VEP									√	√		√		
12.Visual acuity										√		√		
13.Entoptic phenomenon											√			
14.Metabolism: cornea, lens &retina					√									
15.Extra ocular muscle, supra nuclear control, Nystagmus														√
16.Binocular vision													√	
17.Visual field.										√				

Course content	I1	I2	I3	I4	I5
1.Protective mechanism : Eyelids		√	√	√	√

Lacrimal apparatus Cornea.					
2.Ocular circulation .		√	√	√	√
3.Aqueous humour :formation, Ciculation , Function , Drainage,		√	√	√	√
4.Intra Ocular Pressure . : factors influencing, pharmacology, measurment.		√	√	√	√
5.Vitreous body.		√	√	√	√
6.Iris & Pupil: Reflexes: light, near, pharmacology.		√	√	√	√
7.Lens & accommodation.		√	√	√	√
8.Light ;(Nature ,properities), photochemistry of vision & adaptation:(light, dark)		√	√	√	√
9.Colour vision, Theories, colour blindness		√	√	√	√
10.Sensory response (clinical fusion frequency)		√	√	√	√
11.Electrical phenomenon of the eye: ERG ,EOG, VEP	√	√	√	√	√
12.Visual acuity		√	√	√	√
13.Entoptic phenomenon		√	√	√	√
14.Metabolism: cornea, lens &retina		√	√	√	√
15.Extra ocular muscle, supra nuclear control, Nystagmus		√	√	√	√
16.Binocular vision		√	√	√	√
17.Visual field.					

Method of assessment	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A12**	**A13**	**A14**
Written Examination	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Oral Examination	√	√	√	√	√	√	√	√	√	√	√	√	√	√
MCQ	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Log book for activities														
seminars:	√	√	√	√	√	√	√	√	√	√	√	√	√	√

Method of assessment	**I1**	**I2**	**I3**	**I4**	**I5**
Written Examination	√	√	√	√	√
Oral Examination	√	√	√	√	√
MCQ	√	√	√	√	√

Log book for activities					
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Hanaa Abd Elmoneem
Head of the department: Prof. Dr Hesham elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

مقارنة ما يقدمه البرنامج من نتائج تعليمية مستهدفة مع المعايير المرجعية لبرنامج الماجستير فى طب وجراحة العيون.

أ ـ المعرفة والفهم:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير طب وجراحة العيون)
Anatomy and Emberyology of the eye OPHT501 Physiology of the Eye OPHT503 Pathology and Microbiology OPHT 505& 507 Basic of Optics OPHT522 BO Basic of internal medicine related to the eye OPHT510 Neurology related to the eye OPHT512 Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS	A1- 18		1) Theories, concepts and specialized knowledge of the learning area and also sciences appropriate to the professional practice.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	A 3-16 B 2-9 D3, 5-13 D15-19	By the end of the program the graduate should have acquired knowledge in the following areas: i. 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). ii. Physiology - of the eye, adnexae and nervous system, including related general physiology (its laws and phenomena). This extends to the organisation, 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). iii. 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. iv. Pathology - especially the specialist pathology of the eye, adnexae and visual system but within a relevant general pathological context. This includes histopathology, microbiology and	2) Mutual influence between professional practice and its impacts on the environment.

		immunology and their inter-relationships (e.g. in the immunocompromised patient). v. Clinical Science - embracing all aspects of the medicine, therapeutics and surgery of the eye, adnexae and visual pathways, and including interactions with systemic disease and its management and in the context of relevant general aspects of surgery and medicine. There is emphasis on multi-system disease and visual impairment in the context of other co-morbidities. For specific diseases, knowledge is expected concerning aetiology (including pathogenesis, genetics and interactions with patients' physical and social environment), clinical manifestations, investigation, diagnosis, management (including pharmacological, surgical etc.) and prevention, and including management of visual impairment generally. The depth of knowledge in the various subspecialty areas should reflect the epidemiology of the condition (the 'burden of disease' to society and its significance to the patient). For topical ophthalmic drugs, in-depth knowledge of their modes of action and delivery, and means of eye penetration, will be expected together with their potential adverse toxic, allergic and systemic effects and their prevention. vi. Health Service Management – including the political and economic context of patient care, the role of constituent and associated agencies and relevant senior personnel roles in the organisation. Through their progressive experience and self-directed learning, trainees will have acquired a variety of clinical skills during BST, not least: i. Guiding the severely visually impaired with confidence (to a seat etc.) ii. Taking and recording a directed ophthalmological history after establishing a good rapport with the patient and relatives. iii. Undertaking a directed ophthalmological examination and recording and interpreting the physical signs elicited. iv. Ordering appropriate investigations, whilst avoiding unnecessary tests. v. Formulating (at least for common conditions) a definitive ophthalmological diagnosis. vi. Prescribing appropriate local and systemic therapy including antibiotics, anti-virals, steroids, mydriatics and analgesics. vii. Determining the progress of disease or response to treatment or surgery against baseline parameters or that expected through wound healing etc. Recognising and appropriately managing both local and systemic complications of treatment. ii. Preventing contagion and cross infection through sterilisation/disinfection of hands and instruments and adopting measures to reduce the emergence of resistant microorganisms. iii. Communicating effectively with other professionals e.g. through succinct summaries of cases seen, reports, letters and teaching presentations. iv. Understanding occupational visual standards and visual standards for driving, and appropriately referring patients for provision of low vision aids, blind rehabilitation and blind registration. v. Liaising with more senior colleagues and other members of the multidisciplinary team, social services, hospital management etc.	

		In addition to the above, to have developed proficiency in the following: i. Assessment of vision including distance acuity using Snellen test types and objective and subjective refraction, reading vision, colour vision using Ishihara plates and confrontation visual fields (monocular, binocular and red). ii. Undertaking a complete external eye examination including assessment of eye movements, the palpebral aperture and levator excursions. iii. Slit lamp biomicroscopy including the use of stains, local anaesthesia etc. iv. Examination of the pupils including swinging flashlight test. v. Pharmacological tests for Horner's Syndrome and Adie's pupil. vi. Fundus examination including the use of the direct ophthalmoscope, indirect ophthalmoscope and slit lamp biomicroscopy with diagnostic contact lenses and non-contact lenses. vii. Undertaking a directed general medical and neurological examination. viii. Undertaking a directed pre-operative assessment for general or local anaesthesia including venesection, cannulation and set-up of intravenous infusions. ix. Obtaining informed consent from the patient according to GMC guidelines. x. Achieving topical, peribulbar, retrobulbar, sub-tenon's or other regional anaesthesia, and recognising complications of such anaesthesia. xi. Administration of steroids or other drugs subconjunctivally and in the sub-tenon's space and orbital floor. xii. Use of the operating microscope including its set-up and appreciation of the dangers of photic maculopathy. xiii. Sterile and no-touch aseptic techniques. xiv. Basic microsurgical skills including incisions, tissue handling and haemostasis, instrument set-up, instrument handling and suturing/wound closure. xv. Safe use of ophthalmic lasers. xvi. Cardiopulmonary resuscitation (basic life support).	
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	A 6,8,10,16,14,4	State the recent advances in the field of ophthalmology and apply this knowledge in disease management Be developing an ability to interpret investigations appropriately according to the limitations of the tests and their context	3) Scientific developments in the field of specialization
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM	C 2-12		4) Moral and legal ethics of the professional practice in the area of specialization.

Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO .			
1.Microbial genetics. Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B 2-9 C 2-12	Be developing a capacity to formulate a relevant differential diagnosis, to choose an appropriate management strategy from the options available and to plan and implement that strategy.	5) The concepts and principles of quality of the professional practice in the area of specialization.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	D21	Be developing an understanding of the value of clinical audit . Be developing an appreciation of the importance of basic and clinical research in advancing knowledge and contributing to the evidence base as reflected, for example, in clinical guidelines published from time to time by The Royal College of Ophthalmologists	6) The basics and ethics of scientific research.

ب - القدرات الذهنية :

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في طب وجراحة العيون)
1. Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO .	B 2-9	Be developing a capacity to formulate a relevant differential diagnosis, to choose an appropriate management strategy from the options available and to plan and implement that strategy.	1) Analyze and evaluate of information in the field of specialization and make full use of such information to solve problems.
1 Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B 2-9	Be developing a capacity to formulate a relevant differential diagnosis, to choose an appropriate management strategy from the options available and to plan and implement that strategy. Be aware of the limits of their own knowledge and have insight into their own difficulty in understanding complex interactions.	2) Solve specific problems on the basis of limited and contradictory information.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B 2-9		3) Demonstrate a high level of competence in the coordination of different sources of knowledge to solve professional problems..
Basic of surgery related to the eye OPHT520 Ophthalmic	B 2-9 D1,4	.	4) Carry out a research study and / or writing a scientific methodology study on research problem.

Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO			
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B 2-9		5) Assess and analyze risks of the professional practice in the field of specialization.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B 2-9 C 2- 12 D1,4,6		6) Plan to improve performance in the field of specialization
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B 2-9	Ordering appropriate investigations, whilst avoiding unnecessary tests	7) Make career decisions in different professional aspects

ج - المهارات العملية:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير طب وجراحة العيون)
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B1-54 D15-17 D21	Through their progressive experience and self-directed learning, trainees will have acquired a variety of clinical skills during BST, not least: i. Guiding the severely visually impaired with confidence (to a seat etc.) ii. Taking and recording a directed ophthalmological history after establishing a good rapport with the patient and relatives. iii. Undertaking a directed ophthalmological examination and recording and interpreting the physical signs elicited. iv. Ordering appropriate investigations, whilst avoiding unnecessary tests. v. Formulating (at least for common conditions) a definitive ophthalmological diagnosis. vi. Prescribing appropriate local and systemic therapy including antibiotics, anti-virals, steroids, mydriatics and analgesics. vii. Determining the progress of disease or response to treatment or surgery against baseline parameters or that expected through wound healing etc. In addition to the above, to have developed proficiency in the following: i. Assessment of vision including distance acuity using Snellen test types and objective and subjective refraction, reading vision, colour vision using Ishihara plates and confrontation visual fields (monocular, binocular and red). ii. Undertaking a complete external eye examination including assessment of eye movements, the palpebral aperture and levator excursions. iii. Slit lamp biomicroscopy including the use of stains, local anaesthesia etc. iv. Examination of the pupils including swinging flashlight test. v. Pharmacological tests for Horner's Syndrome and	1) Apply modern and principle professional skills in the area of specialization.

		Adie's pupil. vi. Fundus examination including the use of the direct ophthalmoscope, indirect ophthalmoscope and slit lamp biomicroscopy with diagnostic contact lenses and non-contact lenses. vii. Undertaking a directed general medical and neurological examination. viii. Undertaking a directed pre-operative assessment for general or local anaesthesia including venesection, cannulation and set-up of intravenous infusions. ix. Obtaining informed consent from the patient according to GMC guidelines. x. Achieving topical, peribulbar, retrobulbar, sub-tenon's or other regional anaesthesia, and recognising complications of such anaesthesia. xi. Administration of steroids or other drugs subconjunctivally and in the sub-tenon's space and orbital floor. xii. Use of the operating microscope including its set-up and appreciation of the dangers of photic maculopathy. xiii. Sterile and no-touch aseptic techniques. xiv. Basic microsurgical skills including incisions, tissue handling and haemostasis, instrument set-up, instrument handling and suturing/wound closure. xv. Safe use of ophthalmic lasers. xvi. Cardiopulmonary resuscitation (basic life support).	
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	B 2-9 D7,9	Taking and recording a directed ophthalmological history after establishing a good report with the patient and relatives	2) Write and evaluate technical reports.
Basic of surgery related to the eye OPHT520	B 2-9 C 2-12	Ordering appropriate investigations, whilst avoiding unnecessary tests	3) Adopt assessment methods and tools existing in the area of

Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO			specialization

د- مهارات الاتصال:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير في طب وجراحة العيون)
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	D 1-6		1) Communicate effectively in different aspects.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	D 1-6		2) Demonstrate efficient IT capabilities in such a way that serves in the development of the professional practice.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery	D 1-6		3) Adopt self-assessment and specify his needs of personal learning.

OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO			
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	D 1-6		4) Use different resources for information and knowledge.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	D 1-6		5) Establish rules and indicators for assessing the performance of others.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	D 1-6	Communicating effectively with other professionals e.g. through succinct summaries of cases seen, reports, letters and teaching presentations. Liaising with more senior colleagues and other members of the multidisciplinary team, social services, hospital management etc.	6) Collaborate effectively within multidisciplinary team and lead teams in different professional contexts.
Basic of surgery related to the eye OPHT520	D 1-6		7) Demonstrate a high level of competence in the time

Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO			management.
Basic of surgery related to the eye OPHT520 Ophthalmic Medicine OPHT 522 OM Ophthalmic Surgery OPHT 522 OS Neurology related to the eye OPHT512 Basic of internal medicine related to the eye OPHT510 Basic of Optics OPHT522 BO	D 1-6	To promote an appreciation among SHOs of the importance of continuing self-learning, knowledge reinforcement and audit to their expert and effective service to patients in the future.	8) Continuous self-education.

PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme Title & Code	Ophthalmology MD OPHT600
(2) Final award/degree	MD degree
(3) Department (s)	Ophthalmology
(4) Course Coordinator	Prof.Dr Rasheed El-Lakkany Prof of Ophthalmology. Mans. Un.
(5) External evaluator (s)	Prof Dr Mervat Salah Prof of Ophthalmology, Ain Shams Un.
(6) Date of approval by the Department`s council	31/7/2016
(7) Date of last approval of programme specification by Faculty council	9-8-2016

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows: (either to be written in items or as a paragraph)

1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.

2- The programme will assess candidates understanding using the problem based learning questions in each module.

3- The programme will enable the candidate practical skills which required to achieve in their base hospital.

(2) Intended Learning Outcomes (ILOs):

Intended learning outcomes (ILOs); Are four main categories: knowledge & understanding to be gained, intellectual qualities, professional/practical and transferable skills.

On successful completion of the programme, the candidate will be able to:

A- Knowledge and Understanding

A1	Describe the anatomy of the Eye
A2	Recognize updated data and researches concerning the eye, adnexae and nervous system specially in the field of microscopic and functional anatomy.
A3	Recognize Microbiology of the Eye
A4	Recognize updated data and researches concerning the microbiology of the eye, adnexae .
A5	Recognize topics of Ocular Pathology
A6	Recognize updated data and researches concerned Ocular Pathology .
A7	Recognize the topics of Ophthalmic Medicine.
A8	Recognize updated data and researches concerned Ophthalmic Medicine.
A9	Recognize different topics of Ophthalmic surgery
A10	Recognize updated data and researches concerned Ophthalmic surgery
A11	Define the Optics of the Eye
A12	Recognize updated data and researches including the application of physical, geometric and physiological optics to clinical management and an appreciation of the new principles of instrumentation and clinical practice in these areas.
A13	Show their recognition of Physiology of the Eye
A14	Recognize updated data and researches concerned the eye, adnexae and nervous system.

- Intellectual activities (I)

The Postgraduate Degree provides opportunities for candidates to achieve and demonstrate the following intellectual qualities:

B- Intellectual skills

B1	Integrate microscopic and functional anatomy
B2	Integrate basic biomedical science with clinical care.
B3	Predict the natural history of different ocular pathological issues.
B4	Integrate clinical findings in an ophthalmic diagnosis .
B5	Formulate proper plan of treatment
B6	Integrate different procedures in management of ocular diseases.

B7	Formulate a systematic approach for proper refeactive and optical corrective methods
B8	Understand the mechanism of vision, eye metabolism and their deviations

C- Professional/practical skills

C1	Demonstrate their skills in **surgical anatomy and reconstructive surgeries**
C2	Demonstrate their skills in prediction of the nature , severity and prognosis of various ocular disorders.
C3	Demonstrate e their skills in **diagnosis of different pathological lesions.**
C4	Demonstrate their **skills in histopathological diagnosis**.
C5	Demonstrate their skills in **diagnosis of various ocular disorders**.
C6	Show an ability to **implement different managegment plans for various ocular disorders**
C7	Demonstrate their skills in in management of adenexal , corneal ,glaucoma, lens , vitreous , retinal , extra ocular and orbital surgeries
C8	Perform retinoscopy
C9	Interpret topography
C10	Demonstrate their skills in **detection of normal ocular phenomena**

D- Communication & Transferable skills

D1	Demonstrate competence in data presentation. Statistical analysis and interpretation.
D2	Demonstrate key skills in the retrieval, preparation, analysis and interpretation of information from different sources.
D3	Make effective use of information technology e.g. web and internet. Database work
D4	Demonstrate self-direction and some originality in tackling and solving problems
D5	Work effectively both individually and in team and making appropriate use of the capacities of group members
D6	Communicate effectively, using the appropriate method with audiences of different levels of knowledge or experience.

(3) Academic standards:

Academic standards for the programme are attached in Appendix I. in which **NARS** issued by the National Authority for Quality Assurance & Accreditation in Education are used. External reference points/Benchmarks are attached in Appendix II.

External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the programme: (please list here the references and the website)

http://www.rcsed.ac.uk/site/389/default.aspx

http://www.icoph.org/refocusing_education/educational_programs/subspecialty.html

(4) Curriculum structure and contents:

4.a- Duration of the programme (in years or months):…… 36months

4.b- programme structure:

Candidates should fulfill a total of ……60……credit hours (6 semesters)

- ❖ ●4.b.1: Number of credit hours:
- First part:……5……
- Second part:…40
- ✓ 25 credit hours lectures, 4 semesters, 24 months , starting from the 3nd semester, till 6th semester.
- ✓ 15 credit hours log book clinical , practical and scientific activities.
- Thesis:…15 credit hours , 4 semesters, 24 months , starting from the 2nd semester, till 5th semester.

- ❖ ●4.b.2: Teaching hours/week:
- 1st part

Lectures:……5 hours per week ,Clinical/lab Total:5 ×15=75

- 2nd part

Lectures: 6.25 hours per week ,Clinical/lab Total:6.25 ×15×4=375

(5) Programme courses:

المقررات الدراسية وتوزيع الساعات المعتمدة

	المقرر	course	الكود	الساعات المعتمدة	
				المقرر	الاجمالى
الفصل الدراسي الأول	التشريح و علم الأجنة	Anatomy and Emberyology of the eye OPHT601	OPHT601	١	5
	فسيولوجيا العين	Physiology of the Eye OPHT603	OPHT603	١	
	الباثولوجيا و الميكروبيولوجيا	Pathology and Microbiology OPHT 605& 607	OPHT 605& 607	1	
	اساسيات البصريات	Basic of Optics OPHT622 BO	OPHT622 BO	2	
	دراسات متقدمة فى المجال الطبى: - طرق البحث العلمى - الاحصاء الطبى - استخدام الحاسب الالى فى العلوم الطبية	يتم عقد دورات تدريبية لها ويتم استيفاء هذه الدورات بحضورها			
الفصل الدراسى الثانى	مخصص لكتابة بروتوكول الرسالة وتسجيل رسالة الدكتوراه التى تبدأ مع بداية الفصل الدراسى الثانى وتستمر لمدة أربع فصول دراسية				
الفصل الدراسى	جراحة العيون	Surgery OPHT 622 OS	OPHT 622OS	١٢	

25	١٢	OPHT 622 OM	Medicine OPHT 622 OM	طب العيون	**الثالث والرابع والخامس والسادس**
	١	OPHTH622 OG & OPHTH622SC & OPHTH 622NA	Elective Course Ancillary diagnostic ophthalmic tests: 1- Retina 2- Orbit and adenexa 3- Cornea and refractive surgery	**مقرر اختيارى**	
15					**كراسة الانشطة**
12 3	**- برنامج التدريب الاكلينيكى والعملى فى** **- أنشطة علمية مختلفة**				
15	تبدأ مع بداية الفصل الدراسى الثانى وتستمر لمدة أربع فصول دراسية				**الرسالة**
60	**اجمالى الساعات العتمدة**				

MD

Second part

a. Compulsory courses

Course	**Lectures**	**Clinical**	**Total teaching hours**	
			lectures	**Clinical**
Ophthalmic Surgery OPHT 522 OS	12 Sems 3: 3 Sems 4: 3 Sems 5: 3 Sems 6: 3	6 Sems 3: 2 Sems 4: 2 Sems 5: 1 Sems: 1	Sems 3: 45hrs Sems 4: 45 hrs Sems 5: 45hrs Sems6: 45hrs Total: 180hrs	Sems 3: ٦٠hrs Sems 4: ٦٠hrs Sems 5: ٣٠hrs Sems 6: ٣٠hrs Total: ١٨0hrs
Ophthalmic Medicine OPHT 622 OM	12 Sems 3: 3 Sems 4:	6 Sems 3: 2 Sems 4:	Sems 3: 45hrs Sems 4:	Sems 3: ٦٠ hrs Sems 4:

	3 Sems 5: 3 Sems 6: 3	2 Sems 5: 1 Sems: 1	45 hrs Sems 5: 45hrs Sems6: 45hrs Total: 180hrs	٦٠ hrs Sems 5: ٣٠ hrs Sems 6: ٣٠hrs Total: ١٨0hrs
Elective Course	1 hour	-		
	Sems 3:- Sems 4:- Sems 5: - Sems 6: 1	Sems 3: Sems 4: Sems 5: Sems 6: -	Sems 3: Sems 4: Sems 5: Sems 6: 15 hrs Total: 15hrs	Sems 3: Sems 4: Sems 5: Sems 6: Total: -

(6) Programme admission requirements:

:

●General requirements:

By laws regulating post graduate Studies.

●Specific requirements :

N/A

(7) Regulations for progression and programme completion:

First part :

- **Minimally accepted attendance is 7٠%.**

Second part

1- Attendance Criteria:

- Minimally accepted attendance in each course is 7٠%.

2-Log book :

-The log should be fulfilled and signed by Head of the department.

3-Practical work:

-lab rotation according to the schedule determined by the supervisors

4- seminars:

-at least 2 seminars in topics determined by the supervisors must be prepared and presented by the candidate.

(8) Evaluation of Programme's intended learning outcomes (ILOs):

Assessment methods:

8.1: Written exam for assessment of knowledge and intellectual skills.

82: Clinical exam for assessment of intellectual and practical skills

8.3: Oral exam for assessment of knowledge and intellectual skills.

8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment schedule:

- MCQ exam at the end of each semster.
- Final exam at 6th month from admission to MD degree with total of 240 marks

نظام الامتحان وتوزيع الدرجات: (دكتوراه طب وجراحة العيون)

امتحان الجزء الأول

المقرر	الاختبار	الدرجة
		تحريري
التشريح والنمو الجنيني للعين	اختبار تحريري مدته ثلاث ساعات	١٠٠
فسيولوجيا العين	اختبار تحريري مدته ثلاث ساعات	١٠٠
علم البصريات	اختبار تحريري مدته ثلاث ساعات	١٠٠
- باثولوجيا العين	اختبار تحريري مدته ساعتين	٧٥
- الميكروبيولوجيا والمناعة الطبية للعين من الدرجة	اختبار تحريري مدته ساعة	٢٥

الامتحان النهائي الشامل

المقرر	الاختبار	الدرجة				إجمالي
		تحريري	وصف حالة	شفهي	إكلينيكي	عملي	
طب العين	اختبار تحريري مدته ٣ ساعات + اختبار شفهي+ وصف حالة + اختبار إكلينيكي + اختبار عملي	١٢٠	٦٠	١٠٠	١٠٠	١٠٠	٤٨٠
جراحة العين	اختبار تحريري مدته ٣ ساعات + اختبار شفهي + اختبار عملي	١٢٠		١٠٠		١٠٠	٣٢٠
المقرر الاختياري	اختبار تحريري مدته نصف ساعة	٢٠					٢٠
إجمالي الدرجة							٨٢٠

Evaluator	Tools*	Sample size
Internal evaluator (s)	**Prof Dr Hani Abdelrahman**	
External Evaluator (s)	**Prof Dr Mervat Salah**	

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinator: Name: **Prof.Dr Adel El layeh**	Signature & date:

P.S. The programme specification should have attached to it all courses specifications for all courses listed in the matrix.

Programme –Aims and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then aims of the programme are enlisted in first column, and an "√" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

Programme aims																						
	a1	**a2**	**a3**	**a4**	**a5**	**a6**	**a7**	**a8**	**a9**	**a10**	**a11**	**a12**	**a13**	**a14**	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**
1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√							
2- The programme will assess candidates attitude using the problem based learning questions in each module.		√	√	√	√	√	√	√	√	√		√	√	√								
3- The programme will enable the candidate practical skills which required to achieve in their base hospital.															√	√	√	√	√	√	√	

Programme aims																
	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	D1	D2	D3	D4	D5	D6
1-The programme will provide trainee ophthalmologists with an in depth knowledge of the theory behind the practice of ophthalmology.																
2- The programme will assess candidates understanding using the problem based learning questions in each module.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
3- The programme will enable the candidate practical skills which required to achieve in their base hospital.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

programme-Courses ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

Course Title/Code	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14	B1	B2	B3	B4	B5	B6	B7	B8
Anatomy and Embryology of the eye OPHT 622 AE	√	√													√							
Physiology of the eye OPHT 622 PE													√	√								√
Optics OPHT 622 OE											√	√									√	
Ophalmic Pathology OPHT 622 PA					√	√											√					
Microbiology & Immunology of the eye OPHT 607 OPHT 622 MI			√	√												√						

Ophthalmic Medicine **OPHT 622 OM**							√	√										√			
Ophthalmic Surgery **OPHT 622 OS**													√	√					√		

Course Title/Code	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	D1	D2	D3	D4	D5	D6
Anatomy and Embryology of the eye OPHT 622 AE	√										√	√	√	√	√	√
Physiology of the eye OPHT 622 PE										√	√	√	√	√	√	√
Optics OPHT 622 OE								√	√		√	√	√	√	√	√
Ophalmic Pathology OPHT 622 PA			√	√							√	√	√	√	√	√
Microbiology & Immunology of the eye OPHT 607 OPHT 622 MI		√									√	√	√	√	√	√
Ophthalmic Medicine **OPHT 622 OM**	√	√	√	√							√	√	√	√	√	√
Ophthalmic							√				√	√	√	√	√	√

Surgery **OPHT 622 OS**																					

programme-Methods of assessment ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the **programme-Methods of assessment** are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

P.S. All courses` specifications are attached in Appendix III.

programme-Methods of assessment	a1	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12	a13	a14	B1	B2	B3	B4	B5	B6	B7	B8
8.1: Written exam for assessment of knowledge intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
8.2: Clinical exam for assessment of intellectual and															√	√	√	√	√	√	√	√

practical skills																						
8.3: Oral exam for assessment of knowledge and intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√

programme–Methods of assessment	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	D1	D2	D3	D4	D5	D6
8.1: Written exam for assessment of know and intellectual skills.											√	√	√	√	√	√
82: Clinical exam for assessment of intellectual and practical skills	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
8.3: Oral exam for assessment of knowledge and intellectual skills.	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
8.4 MCQ exam for continuous assessment of knowledge and			√	√												

intellectual skills.																

(9) Programme admission requirements:

:

●General requirements:

By laws regulating post graduate Studies.

●Specific requirements :

N/A

(10) Regulations for progression and programme completion:

First part :

- **Minimally accepted attendance is 7٠%.**

Second part

2- Attendance Criteria:

- Minimally accepted attendance in each course is 7٠%.

2-Log book :

-The log should be fulfilled and signed by Head of the department.

3-Practical work:

-lab rotation according to the schedule determined by the supervisors

4- seminars:

-at least 2 seminars in topics determined by the supervisors must be prepared and presented by the candidate.

(11) Evaluation of Programme's intended learning outcomes (ILOs):

Assessment methods:

8.1: Written exam for assessment of knowledge and intellectual skills.

82: Clinical exam for assessment of intellectual and practical skills

8.3: Oral exam for assessment of knowledge and intellectual skills.

8.4 MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment schedule:

- MCQ exam at the end of each semster.
- Final exam at 6th month from admission to MD degree with total of 240 marks

نظام الامتحان وتوزيع الدرجات: (دكتوراه طب وجراحة العيون)

امتحان الجزء الأول

المقرر	الاختبار	الدرجة تحريري
التشريح والنمو الجنيني للعين	اختبار تحريري مدته ثلاث ساعات	١٠٠
فسيولوجيا العين	اختبار تحريري مدته ثلاث ساعات	١٠٠
علم البصريات	اختبار تحريري مدته ثلاث ساعات	١٠٠
- باثولوجيا العين	اختبار تحريري مدته ساعتين	٧٥
- الميكروبيولوجيا والمناعة الطبية للعين من الدرجة	اختبار تحريري مدته ساعة	٢٥

الامتحان النهائي الشامل

المقرر	الاختبار	الدرجة					إجمالي
		تحريري	وصف حالة	شفهي	إكلينيكي	عملي	
طب العين	اختبار تحريري مدته ٣ ساعات + اختبار شفهي + وصف حالة + اختبار إكلينيكي + اختبار عملي	١٢٠	٦٠	١٠٠	١٠٠	١٠٠	٤٨٠
جراحة العين	اختبار تحريري مدته ٣ ساعات + اختبار شفهي + اختبار عملي	١٢٠		١٠٠		١٠٠	٣٢٠
المقرر الاختياري	اختبار تحريري مدته نصف ساعة	٢٠					٢٠
	إجمالي الدرجة						٨٢٠

Evaluator	Tools*	Sample size
Internal evaluator **(s)**	**Prof Dr Hani Abdelrahman**	
External Evaluator **(s)**	**Prof Dr Mervat Salah**	

* TOOLS= QUESTIONNAIRE, INTERVIEW, WORKSHOP, COMMUNICATION, E_MAIL

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Programme coordinator: Name: **Prof.Dr Adel El layeh**	Signature & date:

P.S. The programme specification should have attached to it all courses specifications for all courses listed in the matrix.

COURSE SPECIFICATION

(Anatomy and embryologyof the Eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 1st part
(5) Date of approval by the Department`s council	1/6/2020
(6) Date of last approval of programme specification by Faculty council	20/9/2020
(7) Course title:	Anatomy and Embryology of the eye OPHT 622 AE
(8) Course code:	OPHT 622 AE
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Anatomy of the Eye also to provide the students with updated data and researches concerned the eye, adnexae and nervous system,

.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Describe the normal anatomy, embryologic development, physiology, and biochemistry of the crystalline lens.
A2	Describe the basic structure of the retina and its relationship to the vitreous and choroids.
A3	Describe the anatomy of the cornea& conjunctiva.
A4	Appraise the anatomy of iris &pupil.
A5	Define the anatomy of the vascular system .
A6	Describe the normal anatomy and function of orbital and periocular tissues.
A7	Outline the anatomy of the extraocular muscles and their fascia.
A8	Outline the anatomy of ciliary body & trabecular meshwork.
A9	Appraise the anatomy of the visual pathway in order to localize lesions

B- Intellectual skills

I1	Interpret the most important anatomic land marks
I2	Correlate the surgical anatomy of his clinical practice.
I3	Integrate the anatomy with other basic and clinical sciences.
I4	Identify congenital anomalies of the lens.
I5	Summarize the developmental alterations that lead to structural changes of the cornea.
I6	Correlate clinical and pathologic findings that differentiate intraocular tumors.
I7	Review anatomy of other cranial nerves.
I8	Correlate the physiology and neuro-anatomy of the pupil, cranial nerves, and the visual sensory and ocular motor pathways.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
Embryology& Development , Anatomy , Histology &Cytology.	2				15
Outer coat : Cornea , Limbus. & Sclera.	1				
Middle coat : Choroid, Ciliary body& Iris.	2				
Inner coat : Retina.	2				
Contents : Lens & Vitreous.					

1. Eyelids & Eye brow. 2. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 3. Lacrimal gland. 4. Lacrimal puncta, canaliculi, sac. & Nasolacrimal duct. 5. Extra Ocular Muscles: *Recti & Oblique.* 6. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 7. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.	**2** **3**				
4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital cortex, Blood supply.	**2**				
5) Autonomic nervous system : Sympathetic & Parasympathetic.	**1**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7:Online learning

https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!155&parId=3A011B8AD5F4955!111&authkey=!AKziwX0jTbY2tbE&app=PowerPoint

- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!158&parId=3A011B8AD5F4955!111&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!160&parId=3A011B8AD5F4955!111&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!437&parId=3A011B8AD5F4955!435&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!436&parId=3A011B8AD5F4955!435&authkey=!AKziwX0jTbY2tbE&app=PowerPoint

https://www.youtube.com/watch?v=UszZoiODOUg

- https://www.youtube.com/watch?v=QNJpT3FPz30
- https://www.youtube.com/watch?v=mVuq_C3Bd6U
- https://www.youtube.com/watch?v=XsZWZiVGBk0
- https://www.youtube.com/watch?v=pnLqr1low-0
- https://www.youtube.com/watch?v=HmQeR3BfhcA

- https://www.youtube.com/watch?v=me9HVcJRb6g
- https://www.youtube.com/watch?v=PTFJMywpQK8
- https://www.youtube.com/watch?v=P38tj17D0pw
- https://www.youtube.com/watch?v=c42_HvO28yI
- https://www.youtube.com/watch?v=oBePFR1Jt1U

5.1:Written Examination for assessment of ILOs knowledge & intellectual skill.

5.2 MCQ exam for assessment of ILOs knowledge & intellectual skill.

5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills
attendance of different conferences, thesis discussions, seminars, workshops
Attendance of scientific lectures.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 6 month from MD registration (100 marks)

Assessment 2 : Log book required activities to go through 1st part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: **100 Marks including 20%MCQ**

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(4) References of the course:

6.1: Text books:

- Anatomy of the eye: by Wolf,
- Anatomy and physiology of the eye (MSO, Modern system Of ophthalmology) ,2021
- Will's eye manual,2021
- The ophthalmic Scribe Manual, 2019

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Anatomy of the eye: by Wolf,

(5) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content	a1	a2	a3	a4	a5	a6	a7	a8	a9
Embryology& Development , Anatomy , Histology &Cytology.	√								
Outer coat : Cornea , Limbus. & Sclera.			√						
Middle coat : Choroid, Ciliary body& Iris.				√				√	
Inner coat : Retina.		√							
Contents : Lens & Vitreous.									
8. Eyelids & Eye brow. 9. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 10. Lacrimal gland. 11. Lacrimal puncta,					√	√	√		

canaliculi, sac. & Nasolacrimal duct. 12. Extra Ocular Muscles: *Recti & Oblique.* 13. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 14. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.									
4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital cortex, Blood supply.									√
5) Autonomic nervous system : Sympathetic & Parasympathetic.									√

Course content	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**
Embryology& Development , Anatomy , Histology &Cytology.			√					
Outer coat : Cornea , Limbus. & Sclera.	√	√	√					
Middle coat : Choroid, Ciliary body& Iris.			√	√		√		√
Inner coat : Retina.		√	√			√		
Contents : Lens & Vitreous.			√		√	√		
1. Eyelids & Eye brow. 2. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 3. Lacrimal gland. 4. Lacrimal puncta, canaliculi, sac. & Nasolacrimal duct.	√	√	√			√	√	

5. Extra Ocular Muscles: *Recti & Oblique.* 6. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 7. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.								
4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital cortex, Blood supply.		√	√				√	√
5) Autonomic nervous system : Sympathetic & Parasympathetic.		√	√				√	√

Course content								
	T1	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**
Embryology& Development , Anatomy , Histology &Cytology.	√	√	√	√	√	√	√	√
Outer coat : Cornea , Limbus. & Sclera.	√	√	√	√	√	√	√	√
Middle coat : Choroid, Ciliary body& Iris.	√	√	√	√	√	√	√	√
Inner coat : Retina.	√	√	√	√	√	√	√	√
Contents : Lens & Vitreous.	√	√	√	√	√	√	√	√
1. Eyelids & Eye brow. 2. Conjunctiva, Conjuntival glands, caruncle, plica semilunaris. 3. Lacrimal gland. 4. Lacrimal puncta, canaliculi, sac. & Nasolacrimal duct.	√	√	√	√	√	√	√	√

5. Extra Ocular Muscles: *Recti & Oblique.* 6. Orbit , Paranasal sinuses , Fascia, fat & nerves (Oculomotor, Trochlear, Trigeminal, Abducent, Facial, & Auditory). 7. Arterial supply , Venous Drainage:(Ophthalmic artery & branches ,Ophthalmic vein & tributaries) & Lymph drainage.								
4)Visual pathway : Optic nerve , optic chiasma , optic tract , Lateral Geniculate Nucleus , optic radiations, occipital cortex, Blood supply.	√	√	√	√	√	√	√	√
5) Autonomic nervous system : Sympathetic & Parasympathetic.	√	√	√	√	√	√	√	√

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment									
	a1	**a2**	**a3**	**a4**	**a5**	**a6**	**a7**	**a8**	**a9**
5.1:Written Examination	√	√	√	√	√	√	√	√	√
5.2 MCQ exam for	√	√	√	√	√	√	√	√	√
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.				√				√	

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .									

Course content								
	I1	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**
5.1:Written Examination	√	√	√	√	√	√	√	√
5.2 MCQ exam	√	√	√	√	√	√	√	√
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.								
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√

Course coordinator: : Prof. Dr Hamza Abd Elhameed

Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ancillary diagnostic ophthalmic tests in
CORNEA AND REFRACTIVE SURGERY)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 2nd part
(5) Date of approval by the Department`s council	1/6/2020
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ancillary diagnostic ophthalmic tests in CORNEA AND REFRACTIVE SURGERY **OPHT 622 CS**
(8) Course code:	**OPHT 622 CS**
(9) Credit hours	**1**
(10) Total teaching hours:	15 hours lectures

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize clinical diagnosis of diseases affecting the eye and the adnexa
A2	Investigate tools necessary for the diagnosis of ophthalmic diseases
A3	Identify clinical skills necessary for diagnosis of eye diseases
A4	Recognize medical emergencies and critical care in ophthalmology

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Examine properly and systematically the eye and the adenexa with an exact follow of the standard rules and interpret signs individually.
P3	Integrate data from the history and the examination done.
P4	Ask for the proper investigations to be done for a given medical problem.
P5	Put a diagnosis and differential diagnosis of different cases.
P6	Write a treatment prescription for a given medical problem within a multidisciplinary management plan if needed.
P7	Identify patients needing hospitalization, and those needing surgical intervention.
P8	Identifying patients in need for higher specialization.
P9	Diploma the different emergency and routine procedures necessary in the general

	ophthalmic specialty.
P10	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

(3) Course content:

Subjects	Lecture	Clinica	Field	Total Teaching Hours
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	**3**			**15 lectures**
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	**2**			
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	**5**			
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	**5**			

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning
https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&id=3A011B8AD5F4955%21116&cid=03A011B8AD5F4955

(4) Assessment methods:

5.1:Written Examination

5.4 MCQ continuous assessment

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written exam after 36 month from MD registration

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills**.**

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 20 Marks (including 20% MCQ)

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Cornea and refractive surgery, American Academy Of Ophthalmology BCSC, 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmology, Yanoff

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content	A1	A2	A3	A4	I 1	I2	I3	I4
ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√	√
ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√	√
ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√	√
ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√	√

Course content	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√	√	√	√
ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√	√	√	√
ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND	√	√	√	√	√	√	√	√	√	√

REFRACTIVE SURGERY										
ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√	√	√	√

Course content							
	T1	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**
ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment								
	A1	**A2**	**A3**	**A4**	**I 1**	**I2**	**I3**	**I4**
Written Examination	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis								

discussions, seminars, workshops Attendance of scientific lectures								
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√

Course methods of assessment	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**
Written Examination	√	√	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.										
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√	√	√

Course methods of assessment	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**
Written Examination	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.							
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the	√	√	√	√	√	√	√

department staff .							

Course coordinator: : Prof.Dr Essam badour
Head of the department: Prof.Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ancillary diagnostic ophthalmic tests in
ORBIT AND ADENEXA)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	Second part.
(5) Date of approval by the Department`s council	**1/6/ 2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ancillary diagnostic ophthalmic tests in ORBIT AND ADENEXA OPHT 522 OA
(8) Course code:	522 OA
(9) Credit hours	1
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Investigate tools necessary for the diagnosis of ophthalmic diseases.

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Integrate data from the history and the examination done.
P3	Ask for the proper investigations to be done for a given medical problem.
P4	Put a diagnosis and differential diagnosis of different cases.
P5	Identify patients needing hospitalization, and those needing surgical intervention.
P6	Identifying patients in need for higher specialization.
P7	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

(3) Course content:

Subjects	Lecture	Clinica	Laborato	Field	Total Teachi Hours
1. **ROLE OF CT IN DIGNOSIS ORBITAL AND ADENEXAL DISORDERS**	**5**				**15**
2. **ROLE OF MRI IN DIGNOSIS OF ORBITAL AND ADENEXAL DISORDERS**	**5**				
3. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF ORBITAL AND ADENEXAL DISORDERS**	**5**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial

4.5: Seminars
4.6: Workshops
4.7: Online learning
https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&id=3A011B8AD5F4955%21116&cid=03A011B8AD5F4955
https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&id=3A011B8AD5F4955%21138&cid=03A011B8AD5F4955

(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual.

5.2: MCQ for assessment of ILOs knowledge & intellectual.
5.3: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1 : Log book required activities to go through 2nd part examination .

Assessment 2: MCQ exam for continuous assessment of knowledge and intellectual skills.

Assessment 3 the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff

Percentage of each Assessment to the total mark:
(written 20 marks)
Written exam: 100 %
Oral &practical exam 00 %

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Kanski Clinical Ophthalmology: A systematic approach, 2019
- Orbit, Eyelids and Lacrimalsystem; American Academy Of Ophthalmology BCSC, 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmology, Yanoff

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department
- Lecture rooms: available in the department
-

Subjects	A1	I1	I2	I3	I4
1. I	√	√	√	√	√
2. ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
4. ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√

Subjects	P1	P2	P3	P4	P5	P6	P7
1. ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
2. ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN	√	√	√	√	√	√	√

DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY							
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√	√	√

Subjects	**T1**	**T2**	**T3**	**T4**	**T5**
1. **ROLE OF CT IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
2. **ROLE OF MRI IN DIGNOSIS CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√
3. ROLE OF CORNEAL TOPOGRAPHY, ORBISCAN AND PENTACAM IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY	√	√	√	√	√
4. **ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF CORNEA AND REFRACTIVE SURGERY**	√	√	√	√	√

Course assessment method	**A1**	**I1**	**I2**	**I3**	**I4**
Written Examination	√	√			√
MCQ Examination	√	√			√
Log Book activities					
seminars:	√	√	√	√	√

Course assessment method	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**
Written Examination			√	√	√	√	√	√	√
MCQ Examination			√	√	√	√	√	√	
Log Book activities									

seminars:			√	√	√	√	√	√	

Course assessment Method	**T1**	**T2**	**T3**	**T4**	**T5**
Written Examination					
MCQ Examination					
Log Book activities	√				
seminars:	√	√	√	√	√

Course coordinator: : Prof. Dr Nader Roshdy
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ancillary diagnostic ophthalmic tests in RETINA)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 2nd part
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ancillary diagnostic ophthalmic tests in RETINA **OPHT 622 RE**
(8) Course code:	**OPHT 622 RE**
(9) Credit hours	**1**
(10) Total teaching hours:	15 hours lectures

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize clinical diagnosis of diseases affecting the eye and the adnexa
A2	Investigate tools necessary for the diagnosis of ophthalmic diseases
A3	Identify clinical skills necessary for diagnosis of eye diseases
A4	Recognize medical emergencies and critical care in ophthalmology

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Examine properly and systematically the eye and the adenexa with an exact follow of the standard rules and interpret signs individually.
P3	Integrate data from the history and the examination done.
P4	Ask for the proper investigations to be done for a given medical problem.
P5	Put a diagnosis and differential diagnosis of different cases.
P6	Write a treatment prescription for a given medical problem within a multidisciplinary management plan if needed.
P7	Identify patients needing hospitalization, and those needing surgical intervention.
P8	Identifying patients in need for higher specialization.
P9	Diploma the different emergency and routine procedures necessary in the general ophthalmic specialty.
P10	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

(3) Course content:

Subjects	Lecture	Clinica	Field	Total Teaching Hours
1. ROLE OF FUNDUS FLUORESCINE ANGIOGRAM IN DIGNOSIS OF RETINAL DISORDERS	5			15 lectures
2. ROLE OPTICAL COHERENCE TOMOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS	5			
3. ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS	5			

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&id=3A011B8AD5F4955%21116&cid=03A011B8AD5F4955
https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&id=3A011B8AD5F4955%21120&cid=03A011B8AD5F4955

(4) Assessment methods:

5.1:Written Examination for assessment

5.4 MCQ continuous assessment

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written exam after 36 month from MD registration

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills**.**

Assessment 4**:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 20 Marks (including 20% MCQ)

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Handbook Of Retinal OCT: by Jay S.Duker, 2021
- Retina and vitreous: American academy Of Ophthalmology, BCSC, 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmology, Yanoff
-

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content								
	A1	A2	A3	A4	A5	A6	A7	A8
ROLE OF FUNDUS FLUORESCINE ANGIOGRAM IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√	√
ROLE OPTICAL COHERENCE TOMOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√	√
ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√	√

Course content										
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
ROLE OF FUNDUS FLUORESCINE ANGIOGRAM IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√	√	√	√
ROLE OPTICAL COHERENCE TOMOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√	√	√	√
ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√	√	√	√

Course content							
	T1	T2	T3	T4	T5	T6	T7
ROLE OF FUNDUS FLUORESCINE ANGIOGRAM IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√
ROLE OPTICAL	√	√	√	√	√	√	√

COHERENCE TOMOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS							
ROLE OF ULTRA SONOGRAPHY IN DIGNOSIS OF RETINAL DISORDERS	√	√	√	√	√	√	√

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment								
	A1	**A2**	**A3**	**A4**	**I1**	**I2**	**I3**	**I4**
Written Examination	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures								
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√

Course methods of assessment										
	P1	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**
Written Examination	√	√	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis										

discussions, seminars, workshops Attendance of scientific lectures.										
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√	√	√

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Course methods of assessment							
	T1	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**
Written Examination	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.							
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√

Course coordinator: : Prof.Dr Rasheed Ellakany
Head of the department: Prof.Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Microbiology of the Eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	Master degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 1st part
(5) Date of approval by the Department`s council	1/6/ 2020
(6) Date of last approval of programme specification by Faculty council	20/9/2020
(7) Course title:	Microbiology & Immunology of the eye OPHT 607 OPHT 622 MI
(8) Course code:	OPHT 607 OPHT 622 MI
(9) Credit hours	1/4
(10) Total teaching hours:	3.75 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Microbiology of the Eye also to provide the students with updated data and researches concerned the eye,

.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Describe the disease transmission cycle.
A2	Describe Strategies to combat nosocomial infection.
A3	Recognize necessary vaccines for health care workers
A4	Recognize the steps of post exposure management (exposure to blood and infectious diseases.
A5	Recognize the notifiable infectious disease according to MOHP regulation.
A6	Know elements of standard precaution and transmission based precaution
A7	Show their recognition of : Anatomy of Bacterial cell: morphology &stain. Physiology and metabolism: Pathogenecity- Media- Resistance-Biochemical reaction. Microbial genetics Antimicrobial agents: Antibacterials- Antivirals- Antimycotics
A8	Describe: • Gram positive Cocci: staphylococci- Streptococci- Pneumococci • Gram negative Cocci: Gonococci • Bacilli: Pseudomonas, Proteus, E.coli, Tetanus, Diphtheria, Tuberculosis , Koch Weeks, Marax Axenfeld. • Chlamydia • Spirochetes
A8	Recognize: • General characters of viruses, stains, media, Pathogenesis and control. • Orthovirus: Influenza • Paramyxovirus: Mumps, Measles • Herpes Virus: Herpes Simplex- Herpes Zoster- Cytomegalovirus- Adenovirus • Pox virus: vaccinia- Molluscum contagiosum • Onchogenic virus: Herpes Simplex 2 –Cyto Megalo virus & Papilloma-Epstein Barr virus. • Monilia, Actinomycosis, Nocardiosis, Mycetoma, Sporotrichosis, Blastomycosis, Cryptocoiccosis, Aspergillosis, Histoplasmosis, coccidiodomycosis.
A10	Explain • Host- Parasite relationship • Immune response & Inflammatory cells • Hypersensitivity reactions I, II, III, IV

	• Transplantation immunity (corneal transplant) • Tumour Immunology.

B- Intellectual skills

I1	Select the proper transmission based precaution on dealing with different infectious disease .
I2	Choose in a cost effective way the new and novel modalities used to reduce risk of health care associated infection (urinary cath, central venous catheters, etc…….).
I3	Do risk assessment of different medical interventions and choose the proper level of precautions (clean, aseptic, and surgical techniques)
I4	Choose proper disinfectant / antiseptics in different indications
I5	Identify, calculate and monitor different hospital acquired infections rates using provided tools.
I6	Recognize and notify early outbreaks.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
General Microbiology: - Introduction to microbial causes of human diseases including bacteria, viruses and fungi. - Antimicrobial agents & drug resistance: - Topical (ocular) antimicrobial drugs used for treatment of eye infections.	**1.25**				**3.75**
Immunology: - ***Basic immunology:*** Immune system & Types of immunity. Cells of the immune system and their functions. Antigens , Immunoglobulins and Cytokines. Immtmomodulation.	**1.25**				
Clinical immunology: Innate and adaptive immunity of the eye. Eye as an Immunologic privileged site . Hypersensitivity. • Eye allergy. ➢ Autoimmunity & autoimmune diseases affecting	**1.25**				

eye. ➢ Tumor immunology & immunotherapy. ➢ Transplantation immunology: ● Corneal immunogenicity and corneal transplantation **Clinical Microbiology:** ○ Normal flora of the eye. ○ Microbiological investigations and treatment of eye infections. ○ Mycobacterial and atypical mycobacterial infection ○ Ocular fugal infection ○ Ocular viral infection Chlamydia eye infection.					

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual skill.

5.2 MCQ exam for assessment of ILOs knowledge & intellectual skill.

5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills
attendance of different conferences, thesis discussions, seminars, workshops
Attendance of scientific lectures.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 6 month from MD registration (100 marks)

Assessment 2 : Log book required activities to go through 1st part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 25 Marks including 20%MCQ

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Jawetz Microbiology text book : by microbiology department ,
- Handbook of ocular immunology: by R.J.W de Keizer

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

Microbiology book : by microbiology department ,

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
General Microbiology: - Introduction to microbial causes of	✓									✓

human diseases including bacteria, viruses and fungi. - Antimicrobial agents & drug resistance: - Topical (ocular) antimicrobial drugs used for treatment of eye infections.										
Immunology: - ***Basic immunology:*** Immune system & Types of immunity. Cells of the immune system and their functions. Antigens , Immunoglobulins and Cytokines. Immtmomodulation.						✓	✓	✓		✓
Clinical immunology: Innate and adaptive immunity of the eye. Eye as an Immunologic privileged site . Hypersensitivity. ● Eye allergy. ➢ Autoimmunity & autoimmune diseases affecting eye. ➢ Tumor immunology & immunotherapy. ➢ Transplantation immunology: ● Corneal immunogenicity and corneal transplantation						✓	✓	✓		✓
Clinical Microbiology: ○ Normal flora of the eye. ○ Microbiological investigations and treatment of eye infections. ○ Mycobacterial and atypical mycobacterial infection ○ Ocular fugal infection ○ Ocular viral infection Chlamydia eye infection.		✓	✓	✓	✓	✓	✓	✓	✓	

Subjects	I1	I2	I3	I4	I5	I6	I7
General Microbiology: - Introduction to microbial causes of human diseases including bacteria,	✓						

viruses and fungi. - Antimicrobial agents & drug resistance: - Topical (ocular) antimicrobial drugs used for treatment of eye infections.							
Immunology: - ***Basic immunology:*** Immune system & Types of immunity. Cells of the immune system and their functions. Antigens , Immunoglobulins and Cytokines. Immtmomodulation.							
Clinical immunology: Innate and adaptive immunity of the eye. Eye as an Immunologic privileged site . Hypersensitivity. ● Eye allergy. ➢ Autoimmunity & autoimmune diseases affecting eye. ➢ Tumor immunology & immunotherapy. ➢ Transplantation immunology: ● Corneal immunogenicity and corneal transplantation							
Clinical Microbiology: ○ Normal flora of the eye. ○ Microbiological investigations and treatment of eye infections. ○ Mycobacterial and atypical mycobacterial infection ○ Ocular fugal infection ○ Ocular viral infection Chlamydia eye infection.	✓	✓	✓	✓	✓	✓	✓

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
5.1:Written Examination	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical &										

transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.**										
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .		✓	✓	✓	✓	✓	✓	✓	✓	✓

Subjects	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**
5.1:Written Examination	✓	✓	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.**							
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓	✓

Course coordinator: : Prof.Dr Asaad Ghanem

Head of the department: Prof.Dr Hesham Elsorogy

Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby

Dean: Prof. Dr Nesreen Salah Omar

درجة الدكتوراة في طب وجراحة العيون

COURSE SPECIFICATION
(Ophthalmic Medicine)
Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	**MD degree of Ophthalmology programme**
(2) Department offering the programme:	**Ophthalmology department**
(3) Department responsible for teaching the course:	**OPhthalmology department**
(4) Part of the programme:	**MD degree of Ophthalmology programme 2nd part**
(5) Date of approval by the Department`s council	
(6) Date of last approval of programme specification by Faculty council	
(7) Course title:	**Ocular Genetics** **OPHT 622 OG**
(8) Course code:	**OPHT 622 OG**
(9) Total teaching hours:	**7.5 hours lectures** **15 hours clinical**

(B) Professional information

(1) Course Aims:
The broad aim of the course is to educate students about Ocular genetics also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A56	**Recognize clinical diagnosis of diseases affecting the eye and the adnexa**
A57	**Investigate tools necessary for the diagnosis of ophthalmic diseases**
A58	**Identify clinical skills necessary for diagnosis of eye diseases**
A59	**Recognize medical emergencies and critical care in ophthalmology**

B- Intellectual skills

I37	**Specify medical dilemmas and complexities and how to solve them.**
I38	**Make conclusions and be able to conduct scientific discussion.**
I39	**Select from different choices based on multiple determining factors as social, scientific, economic etc...**
I40	**Prioritize and tailor the different guidelines to individual situations.**

C- Professional/practical skills

P25	**Take a focused medical history with proper analysis and conclusions.**
P26	**Examine properly and systematically the eye and the adenexa with an exact follow of the standard rules and interpret signs individually.**
P27	**Integrate data from the history and the examination done.**
P28	**Ask for the proper investigations to be done for a given medical problem.**
P29	**Put a diagnosis and differential diagnosis of different cases.**
P30	**Write a treatment prescription for a given medical problem within a multidisciplinary management plan if needed.**
P31	**Identify patients needing hospitalization, and those needing surgical intervention.**
P32	**Identifying patients in need for higher specialization.**
P33	**Diploma the different emergency and routine procedures necessary in the general ophthalmic specialty.**
P34	**Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.**

D- Communication & Transferable skills

T39	**Understand the importance of continuing professional development.**
T40	**Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research.**
T41	**Acquire the ability of assisting and teaching younger ophthalmologists.**
T42	**Work cooperatively and show respect for other opinions. Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.**
T42	**Master computer skills in research, data base filing and preparation of presentation.**

T43	**Use computer efficiently in solving medical problems.**
T44	**Present a research assignment orally and deliver it in both written and electronic form.**
T45	**Acquire managerial skills.**

(3) Course content:

Subjects	Lectures	Clinical	Field	Total Teaching Hours
Gene therapy in macular disorders				**7.5 lectures 15 hours clinical**
Gene therapy in Glaucoma				
Other congenital ophthalmic disorders				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops

(4) Assessment methods:
5.1:Written Examination for assessment

5.4 MCQ continuous assessment

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: **written exam after 36 month from MD registration**

Assessment 2 : **Log book required activities to go through 2nd part examination .**
Assessment 3 : **MCQ exam for continuous assessment of knowledge and intellectual skills.**
Assessment 4**: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).**

Percentage of each Assessment to the total mark:

Written exam: 120 Marks (including 20% MCQ)
Oral : 100 Marks
Clinical : 100Marks
Practical : 100 Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- **Ophthalmology, Yanoff**

6.2: Websites:

- **rcoph.org.uk**

6.3: Recommended books

- **Ophthalmology, Yanoff**
-

(6) Facilities and resources mandatory for course completion:

- **Lecture rooms: available in the department**

Course content and ILOs Matrix
Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content	A56	A57	A58	A59	I37	I38	I39	I40
Gene therapy in macular disorders	√	√	√	√	√	√	√	√
Gene therapy in Glaucoma	√	√	√	√	√	√	√	√
Other congenital ophthalmic disorders	√	√	√	√	√	√	√	√

Course content	P25	P26	P27	P28	P29	P30	P31	P32	P33	P34
Gene therapy in macular disorders	√	√	√	√	√	√	√	√	√	√
Gene therapy in Glaucoma	√	√	√	√	√	√	√	√	√	√

Other congenital ophthalmic disorders	√	√	√	√	√	√	√	√	√	√

Course content	**T39**	**T40**	**T41**	**T42**	**T43**	**T44**	**T45**
Gene therapy in macular disorders	√	√	√	√	√	√	√
Gene therapy in Glaucoma	√	√	√	√	√	√	√
Other congenital ophthalmic disorders	√	√	√	√	√	√	√

Course methods of assessment and ILOs Matrix
Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment	**A56**	**A57**	**A58**	**A59**	**I 37**	**I38**	**I39**	**I40**
Written Examination	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures								
seminars: the candidate should prepare and present at least one seminar in atopic	√	√	√	√	√	√	√	√

related to the course and determined by the supervisors in front of the department staff .								

Course methods of assessment										
	P25	**P26**	**P27**	**P28**	**P29**	**P30**	**P31**	**P32**	**P33**	**P34**
Written Examination	√	√	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.										
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√	√	√

Course methods of assessment							
	T39	**T40**	**T41**	**T42**	**T43**	**T44**	**T45**
Written	√	√	√	√	√	√	√

Examination							
MCQ exam for	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.							
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√

Course coordinator: : Prof.Dr Sami Aboelkhir

Head of the department: Prof.Dr Sami Aboelkhir

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 2nd part
(5) Date of approval by the Department`s council	
(6) Date of last approval of programme specification by Faculty council	
(7) Course title:	Ocular Immunology **OPHT 622 OI**
(8) Course code:	**OPHT 622 OI**
(9) Total teaching hours:	7.5 hours lectures 15 hours clinical

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about ocular immunology also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A56	Recognize clinical diagnosis of diseases affecting the eye and the adnexa
A57	Investigate tools necessary for the diagnosis of ophthalmic diseases
A58	Identify clinical skills necessary for diagnosis of eye diseases
A59	Recognize medical emergencies and critical care in ophthalmology

B- Intellectual skills

I37	Specify medical dilemmas and complexities and how to solve them.
I38	Make conclusions and be able to conduct scientific discussion.
I39	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I40	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P25	Take a focused medical history with proper analysis and conclusions.
P26	Examine properly and systematically the eye and the adenexa with an exact follow of the standard rules and interpret signs individually.
P27	Integrate data from the history and the examination done.
P28	Ask for the proper investigations to be done for a given medical problem.
P29	Put a diagnosis and differential diagnosis of different cases.
P30	Write a treatment prescription for a given medical problem within a multidisciplinary management plan if needed.
P31	Identify patients needing hospitalization, and those needing surgical intervention.
P32	Identifying patients in need for higher specialization.
P33	Diploma the different emergency and routine procedures necessary in the general ophthalmic specialty.
P34	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T39	Understand the importance of continuing professional development.
T40	Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research.
T41	Acquire the ability of assisting and teaching younger ophthalmologists.
T42	Work cooperatively and show respect for other opinions. Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T42	Master computer skills in research, data base filing and preparation of presentation.
T43	Use computer efficiently in solving medical problems.
T44	Present a research assignment orally and deliver it in both written and electronic form.
T45	Acquire managerial skills.

(3) Course content:

Subjects	Lectures	Clinical	Field	Total Teaching Hours
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.				**7.5 lectures 15 hours clinical**
Hypersensitivity reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.				
Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroids,Non-steroidal anti-inflammatory drugs.				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class

4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops

(4) Assessment methods:

5.1:Written Examination for assessment

5.4 MCQ continuous assessment

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written exam after 36 month from MD registration

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills**.**

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 120 Marks (including 20% MCQ)
Oral : 100 Marks
Clinical : 100Marks
Practical : 100 Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Ophthalmology, Yanoff

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmology, Yanoff
-

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content	A56	A57	A58	A59	I 37	I38	I39	I40
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.	√	√	√	√	√	√	√	√
Hypersensitivity	√	√	√	√	√	√	√	√

reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.								
Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroids,Non-steroidal anti-inflammatory drugs.	√	√	√	√	√	√	√	√

Course content										
	P25	**P26**	**P27**	**P28**	**P29**	**P30**	**P31**	**P32**	**P33**	**P34**
Immune system, Immune response, Components of immune system, Immune response	√	√	√	√	√	√	√	√	√	√

arc,Immunological defense and Immunoglobulins.										
Hypersensitivity reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.	√	√	√	√	√	√	√	√	√	√
Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroids,Non-steroidal anti-inflammatory drugs.	√	√	√	√	√	√	√	√	√	√

Course content							
	T39	T40	T41	T42	T43	T44	T45
Immune system, Immune response, Components of immune system, Immune response arc,Immunological defense and Immunoglobulins.	√	√	√	√	√	√	√
Hypersensitivity reactions, Acute allergic conjunctivitis, Atopic keratoconjunctivitis,Vernal keratoconjunctivitis,Contact lens inducedd allergic reactions.	√	√	√	√	√	√	√
Antihistamines,Vasoconstrictors, Antihistamines and vasoconstrictors,Mast cell stabilizers,Corticosteroid	√	√	√	√	√	√	√

s,Non-steroidal anti-inflammatory drugs.							

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment	**A56**	**A57**	**A58**	**A59**	**I 37**	**I38**	**I39**	**I40**
Written Examination	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures								
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√

Course methods of assessment	**P25**	**P26**	**P27**	**P28**	**P29**	**P30**	**P31**	**P32**	**P33**	**P34**
Written Examination	√	√	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars,										

workshops Attendance of scientific lectures.										
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√	√	√

Course methods of assessment	**T39**	**T40**	**T41**	**T42**	**T43**	**T44**	**T45**
Written Examination	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.							
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√

Course coordinator: : Prof.Dr Sami Aboelkhir

Head of the department: Prof.Dr Sami Aboelkhir

COURSE SPECIFICATION

(Ophthalmic Pathology)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 1st part
(5) Date of approval by the Department`s council	1/6/2020
(6) Date of last approval of programme specification by Faculty council	20/9/2020
(7) Course title:	**Ophthalmic Pathology OPHT 622 PA**
(8) Course code:	**622 PA**
(9) Credit hours	**3/4**
(10) Total teaching hours:	11.25 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ocular Pathology also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize and define the basic pathologic processes that disturb the structure and function of the eye including cell injury, tissue response to injury (inflammation, healing and repair), neoplasia, infections and parasitic diseases.
A2	List the causes of common diseases affecting the eye.
A3	Explain the pathogenesis of common diseases affecting the eye.
A4	Recognize and describe the basic pathologic features (morphologic alterations) including the gross and microscopic pictures of various common diseases affecting the eye.
A5	Describe how the pathological processes affect the structure and function of the eye.
A6	Identify the functional consequences and clinical manifestations of common diseases affecting the eye.
A7	Explain the signs and symptoms of disease based on its pathogenesis, thereby demonstrating clinical reasoning.
A8	Interpret and identify the complications of common diseases.
A9	Recognize and be fully familiar with the terminology used in the classification, investigation and description of disease, enabling effective communication with professional colleagues and patients

B- Intellectual skills

I1	Correlate the pathologic features of the disease with its clinical presentation, laboratory investigations and complications.
I2	Develop skills of observation, interpretation and integration needed to analyze and diagnose ocular diseases.
I3	Comment on ocular pathological changes of eye structure in different diseases.
I4	Look at and evaluate any eye or biopsy that they have performed or assisted with.
I5	Interpret any pathological changes.
I6	Correlate macroscopic and microscopic pathological changes.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
General pathology	1.25				11.25

Systemic Pathology:					
(A) Adnexae:					
1. Eye lids: skin, glands, congenital, developmental, Aging, Inflammatory , Cysts, Vascular lesions, Benign tumours, Premalignant, malignant.	**2**				
2. Conjunctiva: Congenital , Vascular,Inflammatory (Acute, chronic) , allergic, Degenerations, cysts, tumours (Benign & malignant) , Xerosis.					
3. Orbit, lacrimal : Thyroid ophthalmopathy , Pseudotumour , Granuloma Tumours: lymphoid, vascular, muscular, lacrimal gland.					
(B) Ocular:					
1. **Cornea:** Congenital, Inflammatory, Ulcers, Pannus, keratoconus, Dystrophies.	**1**				
2. **Sclera:** Inflammatory.	**1**				
3. **Uvea:** Choroid,Ciliary body, Iris(Malignant,benign), Metastases Retinoblastoma & Leucocoria.	**1**				
4. **Lens:** Congenital Cataract , Intra Ocular Lens implantation.	**1**				
5. **Glaucomas**	**1**				
6. **Vitreous:** Posterior vitreous detachment , opacities & Haemorrhage.	**0.5**				
7. **Retina :** Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies,	**1**				

Retinal pigment, degeneration , Retinal detachment					
8. **Macula:** Holes, Dystrophies & Age related macular degeneration .	**0.5**				
9. **Optic nerve:** Congenital Anomalies , Papilloedema , Optic neuritis , Optic atrophy &Tumours	**1**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online learning
https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&cid=03A011B8AD5F4955&id=3A011B8AD5F4955%21180&parId=3A011B8AD5F4955%21123&o=OneUp

(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual skill.
5.2 MCQ exam for assessment of ILOs knowledge & intellectual skill.

5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills
attendance of different conferences, thesis discussions, seminars, workshops
Attendance of scientific lectures.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 6 month from MD registration (100 marks)

Assessment 2 : Log book required activities to go through 1st part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 75 Marks including 20%MCQ

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Pathology And Intraocular tumors; American academy of Ophthalmology, BCSC 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmic pathology , Yanoff

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9
Systemic Pathology:									
(A) Adnexae:	√								
Eye lids: skin, glands, congenital, developmental, Aging, Inflammatory , Cysts, Vascular lesions, Benign tumours, Premalignant, malignant.	√								
Conjunctiva: Congenital , Vascular,Inflammatory (Acute, chronic) , allergic, Degenerations, cysts, tumours (Benign & malignant) , Xerosis.	√								
Orbit, lacrimal : Thyroid ophthalmopathy , Pseudotumour , Granuloma Tumours: lymphoid, vascular, muscular, lacrimal gland.	√								
(B) Ocular:									
Cornea: Congenital, Inflammatory, Ulcers, Pannus, keratoconus, Dystrophies.		√	√	√	√	√	√	√	√
Sclera: Inflammatory.		√	√	√	√	√	√	√	√
Uvea: Choroid,Ciliary body, Iris(Malignant,benign), Metastases Retinoblastoma & Leucocoria.		√	√	√	√	√	√	√	√
Lens: Congenital Cataract , Intra Ocular Lens implantation.		√	√	√	√	√	√	√	√
Glaucomas		√	√	√	√	√	√	√	√
Vitreous: Posterior vitreous detachment , opacities & Haemorrhage.		√	√	√	√	√	√	√	√
Retina : Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies, Retinal pigment, degeneration , Retinal detachment		√	√	√	√	√	√	√	√
Macula: Holes, Dystrophies & Age related macular degeneration .		√	√	√	√	√	√	√	√
Optic nerve: Congenital Anomalies , Papilloedema , Optic neuritis , Optic atrophy &Tumours		√	√	√	√	√	√	√	√

Subjects	I1	I2	I3	I4	I5	I6

Systemic Pathology:						
(A) Adnexae:						
Eye lids: skin, glands, congenital, developmental, Aging, Inflammatory , Cysts, Vascular lesions, Benign tumours, Premalignant, malignant.	√	√	√	√	√	√
Conjunctiva: Congenital , Vascular,Inflammatory (Acute, chronic) , allergic, Degenerations, cysts, tumours (Benign & malignant) , Xerosis.	√	√	√	√	√	√
Orbit, lacrimal : Thyroid ophthalmopathy , Pseudotumour , Granuloma Tumours: lymphoid, vascular, muscular, lacrimal gland.	√	√	√	√	√	√
(B) Ocular:	√	√	√	√	√	√
Cornea: Congenital, Inflammatory, Ulcers, Pannus, keratoconus, Dystrophies.	√	√	√	√	√	√
Sclera: Inflammatory.	√	√	√	√	√	√
Uvea: Choroid,Ciliary body, Iris(Malignant,benign), Metastases Retinoblastoma & Leucocoria.	√	√	√	√	√	√
Lens: Congenital Cataract , Intra Ocular Lens implantation.	√	√	√	√	√	√
Glaucomas	√	√	√	√	√	√

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9
5.1: Written Examination	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.2: MCQ exam for assessment of : mainly for assessment practical & transferrable skills	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.									
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .		✓	✓	✓	✓	✓	✓	✓	✓

Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies, Retinal pigment degeneration , Retinal detachment
Retina : Haemorrhage, exudates, Retinal artery occlusion , Retinal vein occlusion, Retinopathies, Retinal pigment degeneration , Retinal detachment
Macula: Holes, Dystrophies & Age related macular degeneration .
Optic nerve: Congenital Anomalies , Papilloedema , Optic neuritis , Optic atrophy &Tumours

Subjects	I1	I2	I3	I4	I5	I6
5.1:Written Examination	✓	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.**						
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓

Course coordinator: : Prof. Dr Sahar Eltarshouby

Head of the department: Prof Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 2nd part
(5) Date of approval by the Department`s council	
(6) Date of last approval of programme specification by Faculty council	
(7) Course title:	Ophthalmic Applications of NanotechnologyOPHT 622 NT **OPHT 622 NT**
(8) Course code:	**OPHT 622 NT**
(9) Total teaching hours:	7.5 hours lectures 15 hours clinical

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about ophthalmic applications of nanotechnology , also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A56	Recognize clinical diagnosis of diseases affecting the eye and the adnexa
A57	Investigate tools necessary for the diagnosis of ophthalmic diseases
A58	Identify clinical skills necessary for diagnosis of eye diseases
A59	Recognize medical emergencies and critical care in ophthalmology

B- Intellectual skills

I37	Specify medical dilemmas and complexities and how to solve them.
I38	Make conclusions and be able to conduct scientific discussion.
I39	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I40	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P25	Take a focused medical history with proper analysis and conclusions.
P26	Examine properly and systematically the eye and the adenexa with an exact follow of the standard rules and interpret signs individually.
P27	Integrate data from the history and the examination done.
P28	Ask for the proper investigations to be done for a given medical problem.
P29	Put a diagnosis and differential diagnosis of different cases.
P30	Write a treatment prescription for a given medical problem within a multidisciplinary management plan if needed.
P31	Identify patients needing hospitalization, and those needing surgical intervention.
P32	Identifying patients in need for higher specialization.
P33	Diploma the different emergency and routine procedures necessary in the general ophthalmic specialty.
P34	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T39	Understand the importance of continuing professional development.
T40	Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research.
T41	Acquire the ability of assisting and teaching younger ophthalmologists.

T42	Work cooperatively and show respect for other opinions. Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T42	Master computer skills in research, data base filing and preparation of presentation.
T43	Use computer efficiently in solving medical problems.
T44	Present a research assignment orally and deliver it in both written and electronic form.
T45	Acquire managerial skills.

(3) Course content:

Subjects	Lectures	Clinical	Field	Total Teaching Hours
1. **NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY**, TOXICITY CONCERNS WITH NANOTECHNOLOGY				**7.5 lectures 15 hours clinical**
2. **MANUFACTURING METHODS FOR NANOPARTICLES**				
3. NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE				
4. **NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops

(4) Assessment methods:

5.1:Written Examination

5.4 MCQ continuous assessment

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written exam after 36 month from MD registration

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills**.**

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 120 Marks (including 20% MCQ)
Oral : 100 Marks
Clinical : 100Marks
Practical : 100 Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Ophthalmology, Yanoff

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Ophthalmology, Yanoff
-

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content	A56	A57	A58	A59	I 37	I38	I39	I40
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√	√	√	√

Course content	P25	P26	P27	P28	P29	P30	P31	P32	P33	P34
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES	√	√	√	√	√	√	√	√	√	√

, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE										
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√	√	√	√	√	√

Course content							
	T39	**T40**	**T41**	**T42**	**T43**	**T44**	**T45**
NANOSYSTEMS AND FUNDAMENTALS OF NANOTECHNOLOGY, TOXICITY CONCERNS WITH NANOTECHNOLOGY	√	√	√	√	√	√	√
MANUFACTURING METHODS FOR NANOPARTICLES	√	√	√	√	√	√	√
NANOTECHNOLOGY IN RETINAL PROSTHESES, NANOTECHNOLOGY FOR GENE DELIVERY TO THE EYE	√	√	√	√	√	√	√
NANOTECHNOLOGY IN OPHTHALMIC DIAGNOSTICS	√	√	√	√	√	√	√

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment								
	A56	**A57**	**A58**	**A59**	**I 37**	**I38**	**I39**	**I40**
Written Examination	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars,								

workshops Attendance of scientific lectures								
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√

Course methods of assessment	**P25**	**P26**	**P27**	**P28**	**P29**	**P30**	**P31**	**P32**	**P33**	**P34**
Written Examination	√	√	√	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.										
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√	√	√

Course methods of assessment	**T39**	**T40**	**T41**	**T42**	**T43**	**T44**	**T45**
Written Examination	√	√	√	√	√	√	√
MCQ exam for	√	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment practical & transferrable skills attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.							
seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√

Course coordinator: : Prof. Dr Sami Aboelkhir

Head of the department: Prof. Dr Sami Aboelkhir

COURSE SPECIFICATION

(Ophthalmic Medicine)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 2nd part
(5) Date of approval by the Department`s council	**1/6/ 2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ophthalmic Medicine **OPHT 622 OM**
(8) Course code:	**OPHT 622 OM**
(9) Total teaching hours:	180 hours lectures 180 hours clinical

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize clinical diagnosis of diseases affecting the eye and the adnexa
A2	Investigate tools necessary for the diagnosis of ophthalmic diseases
A3	Identify clinical skills necessary for diagnosis of eye diseases
A4	Recognize medical emergencies and critical care in ophthalmology
A5	List neurologic and ophthalmology related disorders
A6	List ocular manifestation of systemic diseases

B- Intellectual skills

I1	Specify medical dilemmas and complexities and how to solve them.
I2	Make conclusions and be able to conduct scientific discussion.
I3	Select from different choices based on multiple determining factors as social, scientific, economic etc...
I4	Prioritize and tailor the different guidelines to individual situations.

C- Professional/practical skills

P1	Take a focused medical history with proper analysis and conclusions.
P2	Examine properly and systematically the eye and the adenexa with an exact follow of the standard rules and interpret signs individually.
P3	Integrate data from the history and the examination done.
P4	Ask for the proper investigations to be done for a given medical problem.
P5	Put a diagnosis and differential diagnosis of different cases.
P6	Write a treatment prescription for a given medical problem within a multidisciplinary management plan if needed.
P7	Identify patients needing hospitalization, and those needing surgical intervention.
P8	Identifying patients in need for higher specialization.
P9	Diploma the different emergency and routine procedures necessary in the general ophthalmic specialty.
P10	Interpret general ophthalmic investigative forms and use their findings in diagnosis and therapy.

D- Communication & Transferable skills

T1	Understand the importance of continuing professional development.
T2	Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research.
T3	Acquire the ability of assisting and teaching younger ophthalmologists.
T4	Work cooperatively and show respect for other opinions. Gain communication skills with workers, nurses, juniors, professors, peers, patients and their care givers.
T5	Master computer skills in research, data base filing and preparation of presentation.
T6	Use computer efficiently in solving medical problems.
T7	Present a research assignment orally and deliver it in both written and electronic form.
T8	Acquire managerial skills.

(3) Course content:

Subjects	Lecture	Clinica	Field	Total Teaching Hours
1. **Diseases of Eyelids :** Blepharitis, allergy- lid retraction- Madarosis- Blepharospasm- Infections	9	**12**		**180 lectures 180 hours clinical**
2. **Diseases of Conjuctiva :** Conjunctivitis (Bacterial, Viral, Chlamydial, allergic)- Mucocutaneous disorders- Dry eye.	**9**	12		
3. **Diseases of Cornea :** Keratitis (Bacterial, Viral, Mycotic)- Pigmentations, Precipitates- Peripheral corneal disorders- Degeneration- Dystrophies- Ectasia.	**9**	12		
4. **Diseases of Sclera :** Scleritis- Episcleritis.	**9**	12		
5. **Glaucomas:** Ocular hypertension- Primary Open angle glaucoma – Normo tensive glaucoma , Primary angle closure glaucoma – secondary Open angle glaucoma , secondary angle closure glaucoma , Infantile & Juvenile.	**9**	12		
6. Diseases of lacrimal appararus: Dacryoadenitis- Dacryocystitis- canaliculitis	10	14		
7. **Disease of Uvea:** Uveitis (Infective, Non-infective, Chrornic)	10	12		

8. **Diseases of Macula:** age related macular degeneration , centrall serous chorio retinopathy , Cystoid macular oedema, Maculopathies.	10	14		
9. **Diseases of Retina:** Dystrophies (Receptors, Retinal pigment epithelium & Choroidal) Degenerations Vascular: Retinopathies (Diabetic, Hypertensive, Renal, Toxaemia, Arteriosclerotic), retinal artery occlusion & retinal vein occlusion	15	20		
10. **Diseases of optic nerve:** Neuropathy, Neuritis, Papilledema, congenital.	20	10		
11. **Neuro-ophthalmology :** Pupillaryanomalies,Nystagmus,ophthalmoplegias, Migraine, Brain stem syndromes, optic atrophy- chiasmal lesions.	25	20		
12. **Medical ophthalmology:** Metabolic (Diabetes- Gout)- Hypovitaminosis- Endocrinal (Pituitary- Thyroid- Parathyroid- Thymus)- Blood diseases- Collagen diseases (systemic luysus erythematous – rheumatic arthritis - Gaint cell arthritis)- Chronic granulomatous diseases (Tuberculosis , syphilis, Leprosy & Sarcoidosis)- Phacomatoses- Musculer diseases.	45	30		

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual skill.

5.2: Oral examination for assessment of ILOs knowledge & intellectual skill.

5.3: Practical examination for assessment of ILOs knowledge & intellectual skill.

5.4 MCQ continuous assessment for assessment of knowledge and intellectual ILOs

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: written, oral, clinical and practical exam after 36 month from MD registration

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills**.**

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 120 Marks (including 20% MCQ)
Oral : 100 Marks
Clinical : 100Marks
Practical : 100 Marks
Case : 60 Marks

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books

- American Academy Of Ophthalmology, BCSC, 2020-2021
- Kanski Clinical Ophthalmology: A systematic Approach,2019

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- American Academy Of Ophthalmology, BCSC, 2020-2021
- Kanski Clinical Ophthalmology: A systematic Approach,2019

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content	A1	A2	A3	A4	A5	A6	A7	A8	A9	A10
Diseases of Eyelids : Blepharitis, allergy- lid retraction- Madarosis- Blepharospasm- Infections	√	√	√	√	√		√	√	√	√
Diseases of lacrimal apparatus: Dacryoadenitis- Dacryocystitis- canaliculitis	√	√	√	√	√		√	√	√	√
Diseases of Conjuctiva : Conjunctivitis (Bacterial, Viral, Chlamydial, allergic)- Mucocutaneous disorders- Dry eye.	√	√	√	√	√		√	√	√	√

Diseases of Cornea : Keratitis (Bacterial, Viral, Mycotic)- Pigmentations , Precipitates- Peripheral corneal disorders- Degeneration- Dystrophies- Ectasia.	√	√	√	√			√	√	√	√
Diseases of Sclera : Scleritis- Episcleritis.	√	√	√	√			√	√	√	√
Glaucomas: Ocular hypertension- Primary Open angle glaucoma – Normo tensive glaucoma , Primary angle closure glaucoma – secondary Open angle glaucoma , secondary angle closure glaucoma , Infantile & Juvenile.	√	√	√	√			√	√	√	√
Disease of Uvea: Uveitis (Infective, Non-infective, Chrornic)	√	√	√	√			√	√	√	√
Diseases of Macula: age related macular degeneration , centrall serous chorio retinopathy , Cystoid macular oedema, Maculopathies .	√	√	√	√			√	√	√	√
Diseases of Retina: Dystrophies	√	√	√	√			√	√	√	√

(Receptors, Retinal pigment epithelium & Choroidal) Degenerations Vascular: Retinopathies (Diabetic, Hypertensive, Renal, Toxaemia, Arteriosclerotic), retinal artery occlusion & retinal vein occlusion										
Diseases of optic nerve: Neuropathy, Neuritis, Papilledema, congenital.	√	√	√	√			√	√	√	√
Neuro-ophthalmology : Pupillaryanomalies,Nystagmus,ophthalmoplegias, Migraine, Brain stem syndromes, optic atrophy-chiasmal lesions.	√	√	√	√	√		√	√	√	√
Medical ophthalmology: Metabolic (Diabetes-Gout)- Hypovitaminosis- Endocrinal (Pituitary-Thyroid- Parathyroid-Thymus)- Blood diseases- Collagen diseases (systemic luysus erythematous – rheumatic arthritis - Gaint cell arthritis)- Chronic granulomatous diseases (Tuberculosis , syphilis, Leprosy & Sarcoidosis)- Phacomatoses- Musculer diseases.	√					√	√	√	√	√

Course content										
	P1	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**

Diseases of Eyelids : Blepharitis, allergy- lid retraction- Madarosis- Blepharospasm- Infections	√	√	√	√	√	√	√	√	√	√
Diseases of lacrimal apparatus: Dacryoadenitis- Dacryocystitis - canaliculitis	√	√	√	√	√	√	√	√	√	√
Diseases of Conjuctiva : Conjunctivitis (Bacterial, Viral, Chlamydial, allergic)- Mucocutaneous disorders- Dry eye.	√	√	√	√	√	√	√	√	√	√
Diseases of Cornea : Keratitis (Bacterial, Viral, Mycotic)- Pigmentations, Precipitates- Peripheral corneal disorders- Degeneration- Dystrophies- Ectasia.	√	√	√	√	√	√	√	√	√	√
Diseases of Sclera : Scleritis- Episcleritis.	√	√	√	√	√	√	√	√	√	√
Glaucomas: Ocular hypertension- Primary Open angle glaucoma – Normo tensive glaucoma , Primary angle closure glaucoma – secondary Open angle glaucoma , secondary	√	√	√	√	√	√	√	√	√	√

angle closure glaucoma , Infantile & Juvenile.										
Disease of Uvea: Uveitis (Infective, Non-infective, Chrornic)	√	√	√	√	√	√	√	√	√	√
Diseases of Macula: age related macular degeneration , centrall serous chorio retinopathy , Cystoid macular oedema, Maculopathies .	√	√	√	√	√	√	√	√	√	√
Diseases of Retina: Dystrophies (Receptors, Retinal pigment epithelium & Choroidal) Degenerations Vascular: Retinopathies (Diabetic, Hypertensive, Renal, Toxaemia, Arteriosclerotic), retinal artery occlusion & retinal vein occlusion	√	√	√	√	√	√	√	√	√	√
Diseases of optic nerve: Neuropathy, Neuritis, Papilledema, congenital.	√	√	√	√	√	√	√	√	√	√
Neuro-ophthalmology : Pupillaryanomalies,Nystagmus,ophthalmoplegias, Migraine, Brain stem syndromes, optic atrophy-chiasmal lesions.	√	√	√	√	√	√	√	√	√	√
Medical ophthalmology: Metabolic (Diabetes-Gout)-Hypovitaminosis-Endocrinal (Pituitary-Thyroid- Parathyroid-	√	√	√	√	√	√	√	√	√	√

Thymus)- Blood diseases- Collagen diseases (systemic luysus erythematous – rheumatic arthritis - Gaint cell arthritis)- Chronic granulomatous diseases (Tuberculosis , syphilis, Leprosy & Sarcoidosis)- Phacomatoses- Musculer diseases.										

Course content	T 1	T2	T3	T4	T5	T6	T7
Diseases of Eyelids : Blepharitis, allergy- lid retraction- Madarosis- Blepharospasm- Infections	√	√	√	√	√	√	√
Diseases of lacrimal appararus: Dacryoadenitis- Dacryocystitis - canaliculitis	√	√	√	√	√	√	√
Diseases of Conjuctiva : Conjunctivitis (Bacterial, Viral, Chlamydial, allergic)- Mucocutaneous disorders- Dry eye.	√	√	√	√	√	√	√
Diseases of Cornea : Keratitis (Bacterial, Viral, Mycotic)- Pigmentations , Precipitates- Peripheral corneal disorders- Degeneration- Dystrophies- Ectasia.	√	√	√	√	√	√	√
Diseases of	√	√	√	√	√	√	√

Sclera : Scleritis-Episcleritis.							
Glaucomas: Ocular hypertension-Primary Open angle glaucoma – Normo tensive glaucoma , Primary angle closure glaucoma – secondary Open angle glaucoma , secondary angle closure glaucoma , Infantile & Juvenile.	√	√	√	√	√	√	√
Disease of Uvea: Uveitis (Infective, Non-infective, Chrornic)	√	√	√	√	√	√	√
Diseases of Macula: age related macular degeneration , centrall serous chorio retinopathy , Cystoid macular oedema, Maculopathies .	√	√	√	√	√	√	√
Diseases of Retina: Dystrophies (Receptors, Retinal pigment epithelium & Choroidal) Degenerations Vascular: Retinopathies (Diabetic, Hypertensive, Renal, Toxaemia, Arteriosclerotic), retinal artery occlusion & retinal vein occlusion	√	√	√	√	√	√	√
Diseases of optic	√	√	√	√	√	√	√

nerve: Neuropathy, Neuritis, Papilledema, congenital.							
Neuro-ophthalmology : Pupillaryanomalies,Nystagmus,ophthalmoplegias, Migraine, Brain stem syndromes, optic atrophy-chiasmal lesions.	√	√	√	√	√	√	√
Medical ophthalmology: Metabolic (Diabetes-Gout)- Hypovitaminosis- Endocrinal (Pituitary-Thyroid- Parathyroid-Thymus)- Blood diseases- Collagen diseases (systemic luysus erythematous – rheumatic arthritis - Gaint cell arthritis)- Chronic granulomatous diseases (Tuberculosis , syphilis, Leprosy & Sarcoidosis)- Phacomatoses- Musculer diseases.	√	√	√	√	√	√	√

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment										
	A1	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**A8**	**A9**	**A10**
5.1:Written Examination	√	√	√	√	√	√	√	√	√	√
5.2 MCQ exam for	√	√	√	√	√	√	√	√	√	√
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars,**										

workshops Attendance of scientific lectures.										
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√	√	√	√

Course content	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**
5.1:Written Examination for assessment of ILOs number A1,A2.	√	√	√	√	√	√	√	√	√	√
5.2 MCQ exam for assessment of ILOs number: A1,A2, ,T1,T2,T3,T4,T5,T6, I3,I5.	√	√	√	√	√	√	√	√	√	√
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.**										
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related	√	√	√	√	√	√	√	√		

to the course and determined by the supervisors in front of the department staff .										

Course content							
	T1	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**
5.1:Written Examination for assessment of ILOs number A1,A2.							
5.2 MCQ exam for assessment of ILOs number: A1,A2, ,T1,T2,T3,T4,T5,T6, I3,I5.							
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.**							
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	√	√	√	√	√	√	√

Course coordinator: : Prof.Dr Hamza Abd Elhameed
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Ophthalmic surgery)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 2nd part
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	Ophthalmic Surgery **OPHT 622 OS**
(8) Course code:	**OPHT 622 OS**
(9) Total teaching hours:	180 hours lectures 180 hours clinical

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Ophthalmic Medicine also to provide the students with updated data and researches.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize the diseases affecting the eye that needs surgical interference.
A2	Understand the variable surgical technique for each ocular disease.
A3	Recognize and train to use the basic ophthalmic surgical instruments machines microscope in wet labs.
A4	Recognize the possible surgical wards hazards and the preventive precautions and measures to avoid or deal with them.
A5	Recognize and apply the proper infection control measures in the surgical wards.
A6	Identify the possible or post operative surgical complications and the preventive precautions and measures to avoid or deal with them.

B- Intellectual skills

I1	Demonstrate competency in basic surgical skills
I2	Choose the proper surgical plan for every case.
I3	Acquire proper decision making for difficult situation.
I4	Acquire proper and confident dealing with intra or post operative complications.

C- Professional/practical skills

P1	Recognize and interpret the basic surgical principles .
P2	Select appropriate surgical needles ,sutures instruments machine for every situation.
P3	Familiarized with the basic surgical procedures in lid, cornea, lens, glaucoma, refractive surgeries, retina, orbit, tumours and emergencies.

D- Communication & Transferable skills

T1	Acquire the ability of assisting and teaching younger ophthalmologists.
T2	Acquire the ability of arranging sets for teaching wet labs
T3	Present a research assignment orally and deliver it in both written and electronic form.
T4	Understand the importance of continuing professional development.
T5	Demonstrate knowledge of the importance of ethical approval and patient consent for clinical research.
T6	Work cooperatively and show respect for other opinions.

(3) Course content:

Subjects	Lecture	Clinica	Laborato	Field	Total Teachi Hours
1. **Sterilization - Aneasthesia.**	**9**	**12**			**180lectures 180clinical**
2. **Eyelids:** Excision & Reconstruction (grafts). Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis,	**9**	12			

canthoplasty, tarsorrhaphy						
3. **Lacrimal gland:** Dacryo adenectomy.	**9**	12				
4. **Conjunctiva :** Excision & reconstruction (Conjunctival Flap , graft .) pteygium.	**9**	12				
5. **Cornea:** Keratectomy-Keratoplasty-keratoprosthesis keratomileuses(Freeze-Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera : graft , repair .	**9**	12				
6. Lacrimal Drainage System : Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation	5	10				
7. Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)	**15**	10				
8. **Iris:** Iridectomy, Iridotomy. Iridoplasty, Excision.	5	10				
9. **Ciliary body :** cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)	**5**	10				
10. **Choroid :** choroidectomy .	**5**	10				
11. **Glaucoma :** .Ext. fixt.op- Implants& valves-Non penetrating op.	10	10				
12. **Retina:** Retinotomy, Retinoctomy, Retinopexy.	15	10				
13. **Vitreous:** Vitrectomy- Evisceration	**15**	10				
14. **Extra Ocular Muscles:** Recession, Resection, Transposition, Advancement	**15**	10				
15. **Orbit:** Orbitotomy- Reconstruction-Contracted socket- Enucleation	15	10				
16. **Trauma:** Contusion- Haemorrhage-Fracture- Foreign bodies- Chemical injuries.	15	10				
17. **LASER:** Cornea, Iris, Trabecular tissue, Ciliary. Body, Retina, Suture lysis-Sclerostomy- Capsulotomy- Phaco.	15	10				

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course content						
	A1	A2	A3	A4	A5	A6
Sterilization - Aneasthesia.					√	
Eyelids: Excision & Reconstruction (grafts). Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis, canthoplasty, tarsorrhaphy	√	√	√	√		√
Lacrimal gland: Dacryo adenectomy.	√	√	√	√		√
Lacrimal Drainage System : Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation	√	√	√	√		√
Conjunctiva : Excision & reconstruction (Conjunctival Flap , graft .) pteygium.	√	√	√	√		√
Cornea: Keratectomy- Keratoplasty- keratoprosthesis keratomileuses(Freeze -Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera :			√	√		√

graft , repair .						
Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)	√	√	√	√		√
Iris: Iridectomy, Iridotomy. Iridoplasty, Excision.	√	√	√	√		√
Ciliary body : cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)	√	√	√	√		√
Choroid : choroidectomy .	√	√	√	√		√
Glaucoma : .Ext. fixt.op- Implants& valves- Non penetrating op.	√	√	√	√		√
Retina: Retinotomy, Retinoctomy, Retinopexy.	√	√	√	√		√
Vitreous: Vitrectomy- Evisceration	√	√	√	√		√
Extra Ocular Muscles: Recession, Resection, Transposition, Advancement	√	√	√	√		√
Orbit: Orbitotomy- Reconstruction- Contracted socket- Enucleation	√	√	√	√		√
Trauma: Contusion- Haemorrhage- Fracture- Foreign bodies- Chemical injuries.	√	√	√	√		√
LASER: Cornea, Iris, Trabecular tissue, Ciliary. Body, Retina, Suture lysis- Sclerostomy- Capsulotomy- Phaco.	√	√	√	√		√

Course content							
	I 1	**I2**	**I3**	**I4**	**P1**	**P2**	**P3**

Sterilization - Aneasthesia.	√						
Eyelids: Excision & Reconstruction (grafts). Correction of ptosis, lagophthalmos, Entropion, Ectropion, lashdisorders. Lid margin: canthotomy, cantholysis, canthoplasty, tarsorrhaphy	√	√	V	√	√	√	√
Lacrimal gland: Dacryo adenectomy.	√	√	√	√	√	√	√
Lacrimal Drainage System : Dacryo cystectomy –Dacryo cysto rhinostomy – Intubation	√	√	√	√	√	√	√
Conjunctiva : Excision & reconstruction (Conjunctival Flap , graft .) pteygium.	√	√	√	√	√	√	√
Cornea: Keratectomy- Keratoplasty- keratoprosthesis keratomileuses(Freeze -Non freeze-laser insito keratomik+++++) - Refractive surgery (Incision, Excision , Addition , Replacement).- Epikertophakia, keratotomy (Radial, Astig., Arcuate, Hexagonal., Keratophakia) Sclera : graft , repair .	√	√	√	√	√	√	√
Lens extraction , intra ocular lens. implantation (Phakic (anterior chamber ,posterior chamber)- Aphakic (anterior chamber ,posterior chamber, Sulcus, scleral . Fixation)	√	√	√	√	√	√	√
Iris: Iridectomy, Iridotomy. Iridoplasty, Excision.	√	√	√	√	√	√	√
Ciliary body : cyclectomy , Cyclodialysis , cyclodestruction (Diathermy, Cryo., LASER)	√	√	√	√	√	√	√

Choroid : choroidectomy .	√	√	√	√	√	√	√
Glaucoma : .Ext. fixt.op- Implants& valves- Non penetrating op.	√	√	√	√	√	√	√
Retina: Retinotomy, Retinoctomy, Retinopexy.	√	√	√	√	√	√	√
Vitreous: Vitrectomy- Evisceration	√	√	√	√	√	√	√
Extra Ocular Muscles: Recession, Resection, Transposition, Advancement	√	√	√	√	√	√	√
Orbit: Orbitotomy- Reconstruction- Contracted socket- Enucleation	√	√	√	√	√	√	√
Trauma: Contusion- Haemorrhage- Fracture- Foreign bodies- Chemical injuries.	√	√	√	√	√	√	√
LASER: Cornea, Iris, Trabecular tissue, Ciliary. Body, Retina, Suture lysis- Sclerostomy- Capsulotomy- Phaco.	√	√	√	√	√	√	√

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning
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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual skill.

5.2: Oral examination for assessment of ILOs knowledge & intellectual skill.

5.3: Practical examination for assessment of ILOs knowledge & intellectual skill.

5.4 MCQ continuous assessment for assessment of knowledge and intellectual ILOs

5.5: Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending scientific lectures as well as self learning.

5.6: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Course methods of assessment						
	A1	**A2**	**A3**	**A4**	**A5**	**A6**
Written Examination for assessment of ILOs number.	√	√	√	√	√	√
Oral examination for assessment of ILOs number:.	√	√	√	√	√	√
Practical examination for assessment of ILOs number	√	√	√	√	√	√
MCQ continuous assessment for assessment of knowledge and intellectual ILOs	√	√	√	√	√	√
Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are accepted through attending different conferences, thesis discussions, seminars, workshops, attending						

scientific lectures as well as self learning.						
seminars: the candida should prepare and pr at least one seminar in atopic related to the co and determined by the supervisors in front of department staff (with marks).	√	√	√	√	√	√

Course methods of assessment	I 1	I2	I3	I4	P1	P2	P3
Written Examination for assessment of ILOs number.		√	√				
Oral examination for assessment of ILOs number:		√	V		√	√	√
Practical examination for assessment of ILOs number.	√	√	√	√	√	√	√
MCQ continuous assessment for assessment of knowledge and intellectual ILOs		√	√		√	√	√
Log book for activities for assessment of : mainly for assessment of practical & transferrable skills which are acceptedthrough attendingdifferent conferences, thesis discussions, seminars, workshops, attending scientific lectures as					√	√	√

well as self learning.							
seminars: the candida should prepare and pr at least one seminar in atopic related to the co and determined by the supervisors in front of department staff (with marks).	√	√	√	√	√	√	√

Assessment schedule:

Assessment 1: written, oral and practical exam after 36 month from MD registration

Assessment 2 : Log book required activities to go through 2nd part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:
Written exam: 120 Marks (including 20% MCQ)
Oral : 100 Marks
Practical : 100 Marks
Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Illustrated Advanced anterior Segment Surgery, 2021
- American Academy Of Ophthalmology, BCSC, 2020-2021
- Kanski Clinical Ophthalmology: A systematic Approach,2019

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Illustrated Advanced anterior Segment Surgery, 2021
- American Academy Of Ophthalmology, BCSC, 2020-2021
- Kanski Clinical Ophthalmology: A systematic Approach,2019

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course coordinator: : Prof. Dr Ashraf Moawaad
Head of the department: Prof.Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Optics of the Eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 1st part
(5) Date of approval by the Department`s council	**1/6/2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	**Optics OPHT 622 OE**
(8) Course code:	**622 OE**
(9) Credit hours	**1**
(10) Total teaching hours:	30 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Optics of the Eye also to provide the students with updated data and researches concerned the eye, 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.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Understand the light and its refraction
A2	Understand the optical principles of different types of lenses and prisms and their identification and uses in fitting glasses.
A3	Understand the optical principles of different types of ophthalmic instruments.
A4	Understand the optical principles of different types of -contact lenses and principles of fitting, intraocular lenses and low vision aids.
A5	Understand the theory and terminology of physical optics.
A6	Recognize the clinical and technical relevance of such optical phenomena as interference, coherence, polarization, diffraction, and scattering.
A7	Understand the basic properties of laser light.
A8	Outline the principles of light propagation and image formation and some properties as refraction, reflection, magnification, and vergence.
A9	Label optical models of the human eye and how to apply them.
A10	Understand the various types of visual perception and function, including visual acuity, brightness sensitivity, color perception, and contrast sensitivity.
A11	List the indications for prescribing bifocals and common difficulties encountered in their use.
A12	Understand the optical principles underlying various modalities in refractive correction: spectacles, contact lenses, intraocular lenses, and refractive surgery.
A13	Understand the basic methods of calculating intraocular powers and the advantages and disadvantages of the different methods.

B- Intellectual skills

I 1	Identify the errors of refraction and their correction
I2	Verify the corrective lenses suitable for every patien
I3	Identify proper use of ophthalmic instrument.
I4	State the steps for performing streak Retinoscopy.
I5	Summarize the steps for performing a manifest refraction using a phoropter or trial lenses.
I6	Describe the use of the Jackson cross cylinder.
I7	Describe the indications for prescribing bifocals and common difficulties encountered in their use.
I8	Review the materials and fitting parameters of both soft and rigid contact lenses.

I9	Explain the optical principles underlying various modalities in refractive correction: spectacles, contact lenses, intraocular lenses, and refractive surgery.
I10	Discuss the basic methods of calculating intraocular powers and the advantages and disadvantages of the different methods.
I11	Describe the conceptual basis of multifocal IOLs and how the correction of presbyopia differs between these IOLs and spectacles.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1. **Physical**	**6**				**30**
○ Nature of light, properties of light					
2. **Geometric**					
○ Reflection: plane, spherical mirrors					
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses					
○ Toric refraction by the eye (Schematic, reduced eye)					
3. **Clinical**	**9**				
○ Aberrations					
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia					
○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis					
○ Binocular Muscle					

Coordination: convergence					
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia					
○ Convergence: excess, insufficiency					
○ Visual acuity: far , Near, measurement					
○ Retinoscopy:					
○ Ophthalmoscopy: Direct, indirect					
○ Verification of refraction	**6**				
4. **Appliances:**					
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids					
5. **Instruments:**	**6**				
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic					
○ LASER	**3**				

(4) Teaching methods:

4.1: Lecture
4.2: Practical class
4.3: Small group discussion with case study and problem solving
4.4: Tutorial
4.5: Seminars
4.6: Workshops
4.7: Online Learning

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(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual skill.

5.2 MCQ exam for assessment of intellectual and knowledge ILOs

5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills
attendance of different conferences, thesis discussions, seminars, workshops
Attendance of scientific lectures.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 6 month from MD registration (100 marks)

Assessment 2 : Log book required activities to go through 1st part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 100 Marks including 20%MCQ

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books,

- Clinical optics: American Academy Of Ophthalmology, BCSC, 2020-2021

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Clinical optics: American Academy Of Ophthalmology, BCSC, 2020-2021

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9
Physical									
○ Nature of light, properties of light	√				√	√	√	√	
Geometric								√	
○ Reflection: plane, spherical mirrors	√				√	√		√	

○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses	√				√	√		√	
○ Toric refraction by the eye (Schematic, reduced eye)	√				√	√		√	
Clinical									
○ Aberrations		√						√	
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia		√							√
○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis		√							√
○ Binocular Muscle Coordination: convergence		√							√
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia		√							√
○ Convergence: excess, insufficiency		√							√
○ Visual acuity: far , Near, measurement		√							
○ Retinoscopy:		√							
○ Ophthalmoscopy: Direct, indirect		√							
○ Verification of refraction		√							
Appliances:			√						
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision			√	√					

aids									
Instruments:									
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic			√						
○ LASER			√				√		

Subjects	A10	A11	A12	A13
Physical				
○ Nature of light, properties of light				
Geometric				
○ Reflection: plane, spherical mirrors				
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses				
○ Toric refraction by the eye (Schematic, reduced eye)				
Clinical				
○ Aberrations				
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia				
○ Accommodation (prespyopia): Excess, spasm,				

insufficiency, paralysis				
○ Binocular Muscle Coordination: convergence				
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia				
○ Convergence: excess, insufficiency				
○ Visual acuity: far , Near, measurement	√			
○ Retinoscopy:				
○ Ophthalmoscopy: Direct, indirect				
○ Verification of refraction				
Appliances:				
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids		√	√	√
Instruments:				
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic				
○ LASER				

Subjects	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Physical											
○ Nature of light, properties of light											
Geometric											
○ Reflection: plane, spherical mirrors											
○ Refraction: Plane, convex lens, concave lens, prisms, cylindrical lenses	√										
○ Toric refraction by the eye (Schematic, reduced eye)	√										
Clinical	√										
○ Aberrations	√										
○ Ametropias: Hyperopia, Myopia, Astigmatism, Aphakia, Anisometropia,aniseikonia	√										
○ Accommodation (prespyopia): Excess, spasm, insufficiency, paralysis											
○ Binocular Muscle Coordination: convergence											
○ Binoular Muscle Anomlies: Heterophoria , Heterotropia			√			√					
○ Convergence: excess, insufficiency			√			√					

○ Visual acuity: far , Near, measurement	√	√	√	√	√	√					
○ Retinoscopy:	√	√	√	√	√	√	√				
○ Ophthalmoscopy: Direct, indirect	√										
○ Verification of refraction	√			√	√		√				
Appliances:											
○ Spectacles, Contact lenses, Intra ocular lenses, Low vision aids	√	√						√	√	√	√
Instruments:											
○ Microscopy , operating microscope , Slit Lamp , Fundus Camera Refractometers , Keratometers , Orthoptic			√								
○ LASER			√								

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9
5.1:Written Examination	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.**									

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .		✓	✓	✓	✓	✓	✓	✓	✓

Subjects	**A10**	**A11**	**A12**	**A13**
5.1:Written Examination	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops** **Attendance of scientific lectures.**				
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .		✓	✓	✓

Subjects	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**	**I7**	**I8**	**I9**	**I10**	**I11**
5.1:Written Examination	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops**											

Attendance of scientific lectures.											
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Subjects	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**	**T9**
5.1:Written Examination									
5.2 MCQ exam for									
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops Attendance of scientific lectures.**									
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓	✓		

Course coordinator: : Prof.Dr Mohammed Khalaf
Head of the department: Prof. Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

COURSE SPECIFICATION

(Physiology of the Eye)

Faculty of Medicine- Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD degree of Ophthalmology programme
(2) Department offering the programme:	Ophthalmology department
(3) Department responsible for teaching the course:	OPhthalmology department
(4) Part of the programme:	MD degree of Ophthalmology programme 1st part
(5) Date of approval by the Department`s council	**1/ 6/ 2020**
(6) Date of last approval of programme specification by Faculty council	**20/9/2020**
(7) Course title:	**Physiology of the eye OPHT 622 PE**
(8) Course code:	**OPHT 622 PE**
(9) Credit hours	**1**
(10) Total teaching hours:	15 hours

(B) Professional information

(1) Course Aims:

The broad aim of the course is to educate students about Physiology of the Eye also to provide the students with updated data and researches concerned the eye, adnexae and nervous system, including related general physiology (its laws and phenomena). This extends to the organisation, 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).

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(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

A1	Recognize and describe the systematic function of the eye.
A2	Recognize and describe Eyebrows, Eyelids, and Face: Structure and Function.
A3	Recognize and describe the lens and iris & pupil function.
A4	Recognize molecular basis of The Tear Film and factors affecting it
A5	Understand the basis of aqueous humor: Secretion and Dynamics and its effect on intraocular pressure.
A6	Understand physiologic basis of Ocular Circulation.
A7	*Recognize the basics of Metabolism and Photochemistry of the Retina.*
A8	Understand physiologic basis of Colour Vision.
A9	Recognize and describe the visual function in the form of acuity, field, color vision, and binocular vision.
A10	Recognize and describe the various ocular phenomenon.
A11	Recognize and describe ocular ability for dark and light adaptation.
A12	Understand and interpret the different electrophysio;ogical studies of the eye with their use in different diseases.
A13	Understand the function of the pupil with interpretation of any abnormality.
A14	Understand the mode of action indications and interaction of ocular pharmacotherapy.

B- Intellectual skills

I1	Interpret the clinical situations resulting from physiological malfunction
I2	Interpret the variable methods for testing ocular functions.
I3	Integrate the physiology of the eye with other basic and clinical sciences.
I4	Choose the proper ocular therapy
I5	Comment on some clinical parameters such as: ERG, EOG, and VEP.

(3) Course content:

Subjects	Lectures	Clinical	Laboratory	Field	Total Teaching Hours
1. **Protective mechanism** : Eyelids Lacrimal apparatus Cornea.	**1**				**15**
2. **Ocular circulation** .	**0.5**				

3. **Aqueous humour :**formation, Criculation , Function , Drainage,	**1**				
4. **Intra Ocular Pressure .** : factors influencing, pharmacology, measurment.	**1**				
5. **Vitreous body.**	**0.5**				
6. **Iris & Pupil:** Reflexes: light, near, pharmacology.	1				
7. Lens & accommodation.	**1**				
8. Light ;(Nature ,properities), photochemistry of vision & adaptation:(light, dark)	1				
9. Colour vision, Theories, colour blindness	**1**				
10. Sensory response (clinical fusion frequency)	1				
11. Electrical phenomenon of the eye: **ERG ,EOG, VEP**	1				
12. Visual acuity	**0.5**				
13. Entoptic phenomenon	**1**				
14. Metabolism: cornea, lens &retina	**0.5**				
15. Extra ocular muscle, supra nuclear control, Nystagmus	**1**				
16. Binocular vision	**1**				
17. Visual field.	**1**				

(4) Teaching methods:

4.1: Lecture

4.2: Practical class

4.3: Small group discussion with case study and problem solving

4.4: Tutorial

4.5: Seminars

4.6: Workshops

4.7.online learning

- https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&id=3A011B8AD5F4955%21110&cid=03A011B8AD5F4955

- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!129&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!145&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!121&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!125&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!146&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!151&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!147&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!148&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!149&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/?authkey=%21AKziwX0jTbY2tbE&cid=03A011B8AD5F4955&id=3A011B8AD5F4955%21150&parId=3A011B8AD5F4955%21110&o=OneUp
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!152&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!153&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!154&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint
- https://onedrive.live.com/view.aspx?cid=03a011b8ad5f4955&page=view&resid=3A011B8AD5F4955!162&parId=3A011B8AD5F4955!110&authkey=!AKziwX0jTbY2tbE&app=PowerPoint

(4) Assessment methods:

5.1:Written Examination for assessment of ILOs knowledge & intellectual skill.

5.2 MCQ exam for assessment of intellectual and knowledge ILOs

5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills

attendance of different conferences, thesis discussions, seminars, workshops
Attendance of scientific lectures.

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .

Assessment schedule:

Assessment 1: after 6 month from MD registration (100 marks)

Assessment 2 : Log book required activities to go through 1st part examination .

Assessment 3 : MCQ exam for continuous assessment of knowledge and intellectual skills.

***Assessment 4*:** the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 100 Marks including 20%MCQ

Other assessment without marks: practical tests and exam, seminars and log book assessment are requirement of the 2nd part exam.

(5) References of the course:

6.1: Text books:

- Physiology of the eye: by Duke elder,
- Anatomy and Physiology of Eye (Modern System of Ophthalmology (MSO) Series) Hardcover – January 30, 2017
- Clinical Anatomy and Physiology of the Visual SystemBook • Third Edition • 2012

6.2: Websites:

- rcoph.org.uk

6.3: Recommended books

- Physiology of the eye: by Duke elder,
- Anatomy and Physiology of Eye (Modern System of Ophthalmology (MSO) Series) Hardcover – January 30, 2017

(6) Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course content and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the course titles or codes are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	A1	A2	A3	A4	A5	A6	A7	A8	A9
Protective mechanism : Eyelids Lacrimal apparatus Cornea.	√	√		√					
Ocular circulation .	√					√			
Aqueous humour :formation, Criculation , Function , Drainage,	√				√				
Intra Ocular Pressure . : factorsinfluencing, pharmacology, measurment.	√								
Vitreous body.	√								
Iris & Pupil: Reflexes: light, near, pharmacology.	√	√							
Lens & accommodation.	√	√							
Light ;(Nature ,properities), photochemistry of vision & adaptation:(light, dark)	√	√						√	√
Colour vision, Theories, colour blindness	√						√	√	√
Sensory response (clinical fusion frequency)	√								√
Electrical phenomenon of the eye: **ERG ,EOG, VEP**	√								√
Visual acuity	√								√
Entoptic phenomenon	√								√
Metabolism: cornea, lens &retina	√					√			
Extra ocular muscle, supra nuclear control, Nystagmus	√								
Binocular vision	√								√
Visual field.	√								√

Subjects	A10	A11	A12	A13	A14
Protective mechanism : Eyelids Lacrimal apparatus Cornea.					
Ocular circulation .					√
Aqueous humour :formation, Criculation , Function , Drainage,					√
Intra Ocular Pressure . : factorsinfluencing, pharmacology, measurment.					√
Vitreous body.					
Iris & Pupil: Reflexes: light, near, pharmacology.			√		
Lens & accommodation.		√		√	√
Light ;(Nature ,properities), photochemistry of vision & adaptation:(light, dark)		√		√	√
Colour vision, Theories, colour blindness	√	√		√	

Subjects	I1	I2	I3	I4	I5
Sensory response (clinical fusion frequency)	√	√	√	√	
Electrical phenomenon of the eye: Lacrimal apparatus Cornea **ERG ,EOG, VEP**	√	√		√	
Visual acuity	√	√	√	√	
Entoptic phenomenon	√	√	√	√	
Metabolism: cornea, lens &retina	√	√	√	√	
Extra ocular muscle, supra nuclear control, Nystagmus	√	√	√	√	
Binocular vision	√	√	√	√	
Visual field.	√	√	√	√	
Light ;(Nature ,properities), photochemistry of vision & adaptation:(light, dark)	√	√	√	√	
Colour vision, Theories, colour blindness	√	√	√	√	
Sensory response (clinical fusion frequency)	√	√	√	√	
Electrical phenomenon of the eye: **ERG ,EOG, VEP**	√	√	√	√	√
Visual acuity	√	√	√	√	√
Entoptic phenomenon	√	√	√	√	√
Metabolism: cornea, lens &retina	√	√	√	√	√

Extra ocular muscle, supra nuclear control, Nystagmus	√	√	√	√	√
Binocular vision	√	√	√	√	√
Visual field.	√	√	√	√	√

Course methods of assessment and ILOs Matrix

Programme ILOs are enlisted in the first row of the table (by their code number: a1, a2……etc), then the Course methods of assessment are enlisted in first column, and an "x" mark is inserted where the respective course contributes to the achievement of the programme ILOs in question.

Subjects	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**	**A7**	**A8**	**A9**

5.1:Written Examination	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops** **Attendance of scientific lectures.**									
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .		✓	✓	✓	✓	✓	✓	✓	✓

Subjects	**A10**	**A11**	**A12**	**A13**	**A14**
5.1:Written Examination	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops** **Attendance of scientific lectures.**					

Subjects	**I1**	**I2**	**I3**	**I4**	**I5**	**I6**
5.1:Written Examination	✓	✓	✓	✓	✓	✓
5.2 MCQ exam for	✓	✓	✓	✓	✓	✓
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .		✓	✓	✓	✓	
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops**						

Attendance of scientific lectures.						
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓

Subjects	**T1**	**T2**	**T3**	**T4**	**T5**	**T6**	**T7**	**T8**	**T9**	**T10**
5.1:Written Examination										
5.2 MCQ exam for										
5.3: Log book for activities for assessment of : mainly for assessment practical & transferrable skills **attendance of different conferences, thesis discussions, seminars, workshops** **Attendance of scientific lectures.**										
5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

5.4: seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff .	✓	✓	✓	✓	✓	✓	✓			✓

Course coordinator: : Prof.Dr Hany Abd El Rahman
Head of the department: Prof.Dr Hesham Elsorogy
Director Of Quality : Prof. Dr Nesreen Mohamed Shalaby
Dean: Prof. Dr Nesreen Salah Omar

مقارنة ما يقدمه البرنامج من نتائج تعليمية مستهدفة مع المعايير المرجعية لبرنامج الدكتوراة فى طب وجراحة العيون.

أ ـ المعرفة والفهم:

المقررات التى تحقق المعايير الأكاديمية للبرامج	ILOs مخرجات التعلم المستهدفة	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الماجستير الدكتوراة فى طب وجراحة العيون
Anatomy and Embryology of the eye **OPHT 622 AE** **Physiology of the eye** **OPHT 622 PE** **Optics** **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 1-14	State the recent advances in the field of ophthalmology and apply this knowledge in disease management Be developing an ability to interpret investigations appropriately according to the limitations of the tests and their context	1) Theories, concepts and specialized knowledge of the learning area and also sciences appropriate to the professional practice.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 3-12	Trainees must also demonstrate their involvement in research, at least by providing evidence of their capability critically to review new developments and research findings in science and medicine as they apply to ophthalmology. It is preferable that they also make their own contribution to the advancement of scientific knowledge through presentations (for example, at the RCOphth Annual Congress and meetings of the Association for Research in Vision and Ophthalmology) and/or through publications in peer-reviewed journals	2) Mutual influence between professional practice and its impacts on the environment.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology**	A 3-12		3) Scientific developments in the field of specialization

of the eye **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**			
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 3-12	By the end of the program the graduate should have acquired knowledge in the following areas: i. 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). ii. Physiology - of the eye, adnexae and nervous system, including related general physiology (its laws and phenomena). This extends to the organisation, 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). iii. 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. iv. 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). v. Clinical Science - embracing all aspects of the medicine, therapeutics and surgery of the eye, adnexae and visual pathways, and including interactions with systemic disease and its management and in the context of relevant general aspects of surgery and medicine. There is emphasis on multi-system disease and visual impairment in the context of other co-morbidities. For specific diseases, knowledge is expected concerning aetiology (including pathogenesis, genetics and interactions with patients' physical and social environment), clinical manifestations, investigation, diagnosis, management (including pharmacological, surgical etc.) and prevention, and including management of visual impairment generally. The depth of knowledge in the various subspecialty areas should reflect the epidemiology of the condition (the 'burden of disease' to society and its significance to the patient). For topical ophthalmic drugs, in-depth knowledge of their modes of action and delivery, and means of eye penetration, will be expected together with their potential adverse toxic, allergic and systemic effects and their prevention. vi. Health Service Management – including the political and economic context of patient care, the role of constituent and associated agencies and relevant senior personnel roles	4) Moral and legal ethics of the professional practice in the area of specialization.

		in the organisation. Through their progressive experience and self-directed learning, trainees will have acquired a variety of clinical skills during BST, not least: i. Guiding the severely visually impaired with confidence (to a seat etc.) ii. Taking and recording a directed ophthalmological history after establishing a good rapport with the patient and relatives. iii. Undertaking a directed ophthalmological examination and recording and interpreting the physical signs elicited. iv. Ordering appropriate investigations, whilst avoiding unnecessary tests. v. Formulating (at least for common conditions) a definitive ophthalmological diagnosis. vi. Prescribing appropriate local and systemic therapy including antibiotics, anti-virals, steroids, mydriatics and analgesics. vii. Determining the progress of disease or response to treatment or surgery against baseline parameters or that expected through wound healing etc. Recognising and appropriately managing both local and systemic complications of treatment. ii. Preventing contagion and cross infection through sterilisation/disinfection of hands and instruments and adopting measures to reduce the emergence of resistant microorganisms. iii. Communicating effectively with other professionals e.g. through succinct summaries of cases seen, reports, letters and teaching presentations. iv. Understanding occupational visual standards and visual standards for driving, and appropriately referring patients for provision of low vision aids, blind rehabilitation and blind registration. v. Liaising with more senior colleagues and other members of the multidisciplinary team, social services, hospital management etc. In addition to the above, to have developed proficiency in the following: i. Assessment of vision including distance acuity using Snellen test types and objective and subjective refraction, reading vision, colour vision using Ishihara plates and confrontation visual fields (monocular, binocular and red). ii. Undertaking a complete external eye examination including assessment of eye movements, the palpebral aperture and levator excursions. iii. Slit lamp biomicroscopy including the use of stains, local anaesthesia etc. iv. Examination of the pupils including swinging flashlight test. v. Pharmacological tests for Horner's Syndrome and Adie's pupil. vi. Fundus examination including the use of the direct ophthalmoscope, indirect ophthalmoscope and slit lamp biomicroscopy with diagnostic contact lenses and non-contact lenses. vii. Undertaking a directed general medical and neurological examination. viii. Undertaking a directed pre-operative assessment for general or local anaesthesia including venesection, cannulation and set-up of intravenous infusions. ix. Obtaining informed consent from the patient according to GMC guidelines. x. Achieving topical, peribulbar, retrobulbar, sub-tenon's or other regional anaesthesia, and recognising complications of such anaesthesia. xi. Administration of steroids or other drugs	

		subconjunctivally and in the sub-tenon's space and orbital floor. xii. Use of the operating microscope including its set-up and appreciation of the dangers of photic maculopathy. xiii. Sterile and no-touch aseptic techniques. xiv. Basic microsurgical skills including incisions, tissue handling and haemostasis, instrument set-up, instrument handling and suturing/wound closure. xv. Safe use of ophthalmic lasers. xvi. Cardiopulmonary resuscitation (basic life support).	
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 3-12		5) The concepts and principles of quality of the professional practice in the area of specialization.
			6) The basics and ethics of scientific research.

ب ـ القدرات الذهنية :

المقررات التي تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراة في طب وجراحة العيون
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 3-12	Be developing a capacity to formulate a relevant differential diagnosis, to choose an appropriate management strategy from the options available and to plan and implement that strategy.	1) Analyze and evaluate of information in the field of specialization and make full use of such information to solve problems.
Optics **OPHT 622 OE**	A 3-12	Be developing a capacity to formulate a relevant differential diagnosis, to choose an appropriate management strategy	2) Solve specific problems on the basis of limited and contradictory

Ophalmic Pathology **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**		from the options available and to plan and implement that strategy. Be aware of the limits of their own knowledge and have insight into their own difficulty in understanding complex interactions.	information.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 3-12		3) Demonstrate a high level of competence in the coordination of different sources of knowledge to solve professional problems..
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 3-12		4) Carry out a research study and / or writing a scientific methodology study on research problem.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic	A 3-12		5) Assess and analyze risks of the professional practice in the field of specialization.

Surgery **OPHT 622 OS**			
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**			6) Plan to improve performance in the field of specialization
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	A 3-12	Ordering appropriate investigations, whilst avoiding unnecessary tests	7) Make career decisions in different professional aspects

ج ـ المهارات العملية:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراة فى طب وجراحة العيون
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery	B 2-7 C 2-9	Through their progressive experience and self-directed learning, trainees will have acquired a variety of clinical skills during BST, not least: i. Guiding the severely visually impaired with confidence (to a seat etc.) ii. Taking and recording a directed ophthalmological history after establishing a good rapport with the patient and relatives. iii. Undertaking a directed ophthalmological examination and recording and interpreting	1) Apply modern and principle professional skills in the area of specialization.

OPHT 622 OS		the physical signs elicited. iv. Ordering appropriate investigations, whilst avoiding unnecessary tests. v. Formulating (at least for common conditions) a definitive ophthalmological diagnosis. vi. Prescribing appropriate local and systemic therapy including antibiotics, anti-virals, steroids, mydriatics and analgesics. vii. Determining the progress of disease or response to treatment or surgery against baseline parameters or that expected through wound healing etc. In addition to the above, to have developed proficiency in the following: i. Assessment of vision including distance acuity using Snellen test types and objective and subjective refraction, reading vision, colour vision using Ishihara plates and confrontation visual fields (monocular, binocular and red). ii. Undertaking a complete external eye examination including assessment of eye movements, the palpebral aperture and levator excursions. iii. Slit lamp biomicroscopy including the use of stains, local anaesthesia etc. iv. Examination of the pupils including swinging flashlight test. v. Pharmacological tests for Horner's Syndrome and Adie's pupil. vi. Fundus examination including the use of the direct ophthalmoscope, indirect ophthalmoscope and slit lamp biomicroscopy with diagnostic contact lenses and non-contact lenses. vii. Undertaking a directed general medical and neurological examination. viii. Undertaking a directed pre-operative assessment for general or local anaesthesia including venesection, cannulation and set-up of intravenous infusions. ix. Obtaining informed consent from the patient according to GMC guidelines. x. Achieving topical, peribulbar, retrobulbar, sub-tenon's or other regional anaesthesia, and recognising complications of such anaesthesia. xi. Administration of steroids or other drugs subconjunctivally and in the sub-tenon's space and orbital floor. xii. Use of the operating microscope including its	

		set-up and appreciation of the dangers of photic maculopathy. xiii. Sterile and no-touch aseptic techniques. xiv. Basic microsurgical skills including incisions, tissue handling and haemostasis, instrument set-up, instrument handling and suturing/wound closure. xv. Safe use of ophthalmic lasers. xvi. Cardiopulmonary resuscitation (basic life support).	
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	B 2-7 C 2-9	Taking and recording a directed ophthalmological history after establishing a good report with the patient and relatives	2) Write and evaluate technical reports.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	B 2-7 C 2-9	Ordering appropriate investigations, whilst avoiding unnecessary tests	3) Adopt assessment methods and tools existing in the area of specialization

د- مهارات الاتصال:

المقررات التى تحقق المعايير الأكاديمية للبرامج	مخرجات التعلم المستهدفة ILOs	(ARS) Benchmark المعايير الأكاديمية لجامعة THE ROYAL COLLEGE OF SURGEONS OF EDINBURGH	(NARS) المعايير القومية الأكاديمية القياسية العامة لبرامج قطاع الدراسات العليا (درجة الدكتوراة فى طب وجراحة العيون)
Optics **OPHT 622 OE** **Ophalmic Pathology**	D 1-6		1) Communicate effectively in different aspects.

OPHT 622 PA **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**			
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	D 1-6		2) Demonstrate efficient IT capabilities in such a way that serves in the development of the professional practice.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	D 1-6	To promote an appreciation among SHOs of the importance of continuing self-learning, knowledge reinforcement and audit to their expert and effective service to patients in the future.	3) Adopt self-assessment and specify his needs of personal learning.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	D 1-6	Have demonstrated their information technology skills, including the use of IT in communication and data handling. A proven ability to search for and retrieve information from conventional and electronic sources, including the internet and Medline, is important.	4) Use different resources for information and knowledge.

Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	D 1-6	Have demonstrated their management skills (e.g. unit administration, understanding budgets, organising meetings etc.).	5) Establish rules and indicators for assessing the performance of others.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	D 1-6		6) Collaborate effectively within multidisciplinary team and lead teams in different professional contexts.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI** Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**	D 1-6	Communicating effectively with other professionals e.g. through succinct summaries of cases seen, reports, letters and teaching presentations. Liaising with more senior colleagues and other members of the multidisciplinary team, social services, hospital management etc.	7) Demonstrate a high level of competence in the time management.
Optics **OPHT 622 OE** **Ophalmic Pathology** **OPHT 622 PA** **Microbiology & Immunology of the eye** **OPHT 607** **OPHT 622 MI**	D 1-6	Professional Attitudes and Conduct: In addition to the above, to have developed a style of care which is: 1) Humane (especially compassion in 'breaking bad news' and of the visually impaired, and recognition of the impact of the patient and society.) 2) Reflective (including	8) Continuous self-education.

Ophthalmic Medicine **OPHT 622 OM** Ophthalmic Surgery **OPHT 622 OS**		recognition of the limits of his/her understanding.) 3) Ethical (e.g. in relation to rationing issues, truth-telling and information.) 4) Integrative (especially involvement in the inter-disciplinary of children, the handicapped and the elderly.) 5) Scientific (e.g. critical appraisal of the scientific literature, practice and use of information technology and statistics	