



كلية الطب  
وحدة ضمان الجودة



Faculty of Medicine  
Quality Assurance Unit

**Medical Doctorate (M.D.) Degree Program and Courses  
Specifications for **OPHTHALMOLOGY****

(According to currently applied Credit point bylaws)

***Department of Ophthalmology  
Faculty of medicine  
Assiut University  
2021-2022/2022-2023***

<b>Contents</b>	
<b>Item</b>	<b>Page</b>
<b>Program Specification For Ophthalmology: 2021-2022/2022-2023</b>	
<b>A. Basic Information</b>	<b>4</b>
<b><u>B. Professional Information</u></b>	<b>5</b>
<ol style="list-style-type: none"> <li><b>1. Program aims</b></li> <li><b>2. Intended learning outcomes (ILOs) for the whole program</b></li> <li><b>3. Program academic standards</b></li> <li><b>4. Program external references</b></li> <li><b>5. Program structure and contents</b></li> <li><b>6. Courses contents (Annex 1)</b></li> <li><b>7. Admission requirements</b></li> <li><b>8. Progression and completion requirements</b></li> <li><b>9. Assessment methods and rules</b></li> <li><b>10. Program evaluation</b></li> <li><b>11. Declaration</b></li> </ol>	
<b>- Annex 1, Courses/ specifications</b>	<b>21</b>
<b>Basic science courses</b>	
<b>Course 1: Medical Statistics</b>	<b>22</b>
<b>Course 2: Research Methodology</b>	<b>29</b>
<b>Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research</b>	<b>37</b>
<b>Course 4: Eye Anatomy, Physiology, Pathology, Microbiology&amp; Optics and refraction</b>	<b>43</b>
<b>Specialty Course</b>	
<b>Course (5) ophthalmology</b>	<b>67</b>
<b>1- Unit (module) 1 Eye Medicine</b>	
<b>2- Unit (module )2 Eye surgery</b>	
<b>- Annex 2, Program academic standards</b>	<b>121</b>
<b>- Annex 3, Teaching methods</b>	<b>126</b>
<b>- Annex 4, Assessment methods</b>	<b>130</b>
<b>- Annex 5, Program evaluation tools</b>	<b>134</b>
<b>- Annex 6 Matrixes:</b>	<b>136</b>
<b>I-General Academic reference standards (GARS) for postgraduates versus Program ARS</b>	

<b>1-Graduate attributes</b> <b>2-Academic Standards</b> <b>II-Program ARS versus program ILOs</b> <b>III- Program Matrix.</b>	
<b>- Annex 7, Additional information.</b>	<b>156</b>

## M. D. degree of ophthalmology

### A. Basic Information

- + **Program Title: M. D. degree of ophthalmology**
- + **Nature of the program: Single.**
- + **Responsible Department: Department of ophthalmology**  
- Faculty of Medicine – Assiut University.
- + **Program Director (Head of the Department): ):**  
Prof. *Mohamed Sayed Saad*
- + **Coordinator (s):**
  - **Principle coordinator:**  
Prof. Mohamad Saad Abdel-Rahman
  - **Assistant coordinator :**  
Dr. Mahmoud Abdel-Radi  
Dr. Ahmed Abdel-Naser
- + **Internal evaluators: Prof. *Mohamed Sayed Saad***
- + **External evaluator: Prof. Mohamed Almodather**  
(Al-Azhar University “Assiut”)
- + **Date of first Approval by the Faculty of Medicine Council of Assiut University: : 23-9-2014**
- + **Date of most recent approval of program specification by the Faculty of Medicine Council of Assiut University: 27-11-2022**
- + **Total number of courses: 5 courses+ 2 elective courses**

## B. Professional Information

### 1- Program aims

1/1 To enable candidates to master high level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of eye diseases and optics problems enabling the candidates of making appropriate referrals to a sub-specialist

1/2 Provide candidates with fundamental knowledge and skills of diseases of the eye patients care recent lines of treatment & equipment.

1/3 To enable candidates to perform high standard scientific medical research and how to proceed with publication in indexed medical journals.

1/4 To enable candidates to describe the basic ethical and medicolegal principles relevant to Ophthalmology

1/5 To enable candidates to have professional careers as a consultant in Egypt but recognized abroad.

1/6 To enable candidates to continue self learning in subspecialties.

1/7 To enable candidates to master different research methodology and do their own.

## **2-Intended learning outcomes (ILOs) *for the whole program*:**

### **2/1 Knowledge and understanding:**

- A. Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio – behavioral science relevant to his speciality as well as the evidence – based application of this knowledge to patient care.
- B. Explain basics, methodology, tools and ethics of scientific medical, clinical research.
- C. Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Ophthalmology
- D. Mention principles and basics measurements of quality assurance and quality improvement in medical education and in clinical practice of Ophthalmology.
- E. Mention health care system, public health and health policy, issues relevant to this speciality and principles and methods of system – based improvement of patient care in common health problems of the field of Ophthalmology

### **2/2 Intellectual outcomes**

- A. Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.
- B. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to speciality.
- C. Plan research projects.
- D. Write scientific papers.
- E. Participate in clinical risk management as a part of clinical governance.
- F. Plan for quality improvement in the field of medical education and clinical practice in his speciality.
- G. Create / innovate plans, systems, and other issues for improvement of performance in his practice.

H. Present and defend his / her data in front of a panel of experts.

I. Formulate management plans and alternative decisions in different situations in the field of the speciality.

### **2/3 Skills**

#### **2/3/1 Practical skills (Patient Care)**

##### **Students will be able to:**

A. Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

*p.s.* Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.

B. Provide extensive level of patient care *for patients with all common diagnoses and for uncomplicated procedures* related to Ophthalmology.

C. Provide extensive level of patient care *for non-routine, complicated patients and under increasingly difficult circumstances*, while demonstrating compassionate, appropriate and effective care.

D. Perform diagnostic and therapeutic procedures considered essential in the field of Ophthalmology

E. Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.

F. Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the Ophthalmology related situations.

G, Gather essential and accurate information about patients of the Ophthalmology related conditions.

H. Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for the speciality related conditions.

I. Develop and carry out patient management plans for Ophthalmology related conditions.

- J. Counsel and educate patients and their families about speciality related conditions.
- K. Use information technology to support patient care decisions and patient education in all Ophthalmology related clinical situations.
- L. Perform competently all medical and invasive procedures considered essential for the Ophthalmology related conditions / area of practices.
- M. Provide health care services aimed at preventing the Ophthalmology related health problems.
- N. Lead health care professionals, including those from other disciplines, to provide patient-focused care in Ophthalmology related conditions.
- O. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)

## **2/3/2 General skills**

### **Including:**

- Practice-based Learning and Improvement
- Interpersonal and Communication Skills
- Professionalism
- Systems-based Practice

### **Practice-Based Learning and Improvement**

- A. Demonstrate continuous evaluation of different types of care provision to patients in the different area of Ophthalmology
- B. Appraise scientific evidence.
- C. Continuously improve patient care based on constant self-evaluation and life-long learning.
- D. Participate in clinical audit and research projects.
- E. Practice skills of evidence-based Medicine (EBM).



- F. Educate and evaluate students, residents and other health professionals.
- G. Design logbooks.
- H. Design clinical guidelines and standard protocols of management.
- I. Appraise evidence from scientific studies related to the patients' health problems.
- J. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.
- K. Use information technology to manage information, access on-line medical information; for the important topics.

### Interpersonal and Communication Skills

L. Master interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals, including:-

- Present a case.
- Write a consultation note.
- Inform patients of a diagnosis and therapeutic plan completing and maintaining comprehensive.
- Timely and legible medical records.
- Teamwork skills.

M. Create and sustain a therapeutic and ethically sound relationship with patients.

N. Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.

O. Work effectively with others as a member or leader of a health care team or other professional group.

### Professionalism

P. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.

Q. Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.

R. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.

### Systems-Based Practice

S. Work effectively in health care delivery settings and systems related to Ophthalmology including good administrative and time management.

T. Practice cost-effective health care and resource allocation that does not compromise quality of care.

U. Advocate for quality patient care and assist patients in dealing with system complexities.

V. Design, monitor and evaluate specification of under and post graduate course and programs.

W. Act as a chair man for scientific meetings including time management.

### 3- Program Academic Reference Standards (ARS) (Annex 2)

#### *Academic standards for Medical Doctorate (MD) degree in Ophthalmology*

Assiut Faculty of Medicine developed MD degree programs' academic standards for different clinical specialties.

In preparing these standards, the General Academic Reference Standards for post graduate programs (GARS) were adopted. These standards set out the graduate attributes and academic characteristics that are expected to be achieved by the end of the program. These standards were approved by the faculty council on 20/3/2010. These standards were revised and approved without changes by the Faculty Council on 23-9-2014.

These standards were re-revised and approved without changes by the Faculty Council on 27-11-2022.

### 4- Program External References (Benchmarks)

1. ACGME (Accreditation Council for Graduate Medical Education).

[http://www.acgme.org/acWebsite/navPages/nav\\_Public.asp](http://www.acgme.org/acWebsite/navPages/nav_Public.asp)

3. American Board of Ophthalmology

<http://www.abop.org/index1.asp>

<b>Comparison between program and external reference</b>		
<b>Item</b>	<b>Ophthalmology program</b>	<b>American Board of Ophthalmology</b>
<b>Goals</b>	Matched	Matched
<b>ILOS</b>	Matched	Matched
<b>Duration</b>	4 -6 years	Different
<b>Requirement</b>	Different	Different
<b>Program structure</b>	Different	Different

## 5- Program Structure

**A. Duration of program: 4-6 years**

**B. Structure of the program:**

**Total number of credit points: = 420 CP**

**Master degree: 180 credit point**

**Didactic #: 37 (23.1%), practical 123 (76.9%), total 160 CP Thesis and researches: 80 CP (33.3%)**

**First part**

**Didactic 10 (100%), practical 0 (0 %), total 10 CP**

**Second part**

**Didactic 24, (16.3 %), practical 123 (83.7 %), total 147 CP**

**Elective courses: 3 credit points**

**#Didactic (lectures, seminars, tutorial)**

**According the currently applied bylaws:**

Total courses: 160 credit point

Compulsory courses: 157 credit point (98.1%)

Elective courses: 3 credit point (1.9%)

	Credit point	% from total
Basic science courses	10	4.1%
Humanity and social courses	3	1.2%
Speciality courses	147	61.3%
Others ( Computer, ...)	-	0
Field training	123	51.3%
Thesis	40	16.7%
2 published researches	40	16.7%
Master degree		180

### C. Program Time Table

Duration of program 4 years divided into

- Part 1

Program-related basic science courses

- Medical statistic
- Research methodology
- Medicolegal Aspects and Ethics in Medical Practice and Scientific Research

Students are allowed to sit the exams of these courses after 6 months from applying to the M D degree.

Students are allowed to sit the exams of the remaining basic science courses after 12 months from applying to the MD degree.

Thesis and 2 published researches

For the M D thesis;

MD thesis subject should be officially registered within 1 year from application to the MD degree,

Discussion and acceptance of the thesis should not be set before 24 months from registering the M D subject;

It could be discussed and accepted either before or after passing the second part of examination

- Part 2

Program –related speciality courses and ILOs

Students are not allowed to sit the exams of these courses before 4 years from applying to the MD degree.

Two elective courses can be set during either the 1<sup>st</sup> or 2<sup>nd</sup> parts.

The students pass if they get 50% from the written exams and 60% from oral exams, 60% from clinical/practical exams of each course and 60% of summation of the written exams, oral and clinical/practical exams of each course

Total degrees 1700 marks.

500 marks for first part

1200 for second part

Written exam 40% - 70%.

Clinical /practical and oral exams 30% - 60%.

## Curriculum Structure: (Courses):

✚ Levels and courses of the program:

Courses and student work load list	Course Code			
		Didactic #	training	total
<b>First Part</b>				
<b>Basic science courses (10 CP)</b>				
Course 1: Medical Statistics	FAC309A	1		1
Course 2: Research Methodology	FAC309B	1		1
Course 3: Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	1		1
Course 4: Eye Anatomy, Physiology, Pathology, Microbiology & Optics and refraction	OPH326A	7		7
<b>Elective courses*</b>		3 CP		
- Elective course 1		1.5		1.5
- Elective course 2		1.5		1.5
<b>Thesis</b>		40 CP		
<b>Published researches**</b>		40 CP		
<b>Second Part</b>		Speciality courses 24 CP Speciality Clinical Work (log Book) 123 CP		
<b>Speciality Courses</b>				
<b>Course 4 Ophthalmology</b>	OPH326B	24		24
<b>1) Unit (Module) 1 Eye Medicine</b>				
<b>2) Unit (Module) 2 Eye Surgery</b>				
<b>Speciality Clinical Work (123 CP)</b>	OPH326B		123	123
<b>Total of second part</b>		24	123	147

### #Didactic (lectures, seminars, tutorial)

\* Elective courses can be taken during either the 1<sup>st</sup> or 2<sup>nd</sup> parts.

### Student work load calculation:

Work load hours are scheduled depending on the type of activities and targeted competences and skills in different courses

### Elective Courses#:

- Advanced medical statistics.
- Evidence based medicine.
- Advanced infection control.
- Quality assurance of medical education.
- Quality assurance of clinical practice.
- -Hospital management

# Two of the above mentioned courses are prerequisites for fulfillment of the degree.

### 3. Thesis / Researches:

40 CP are appointed to the completion and acceptance of the thesis.

\*\* Another 40 points are appointed to acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.

## 6. Courses Contents (Annex 1)

*The competency based objectives for each course/module/rotation are specified in conjunction with teaching/training methods, requirements for achieving these objectives and assessment methods.*

See Annex 1 for detailed specifications for each course/ module  
Annex 6 II: Program Matrix

## 7-Admission requirements

 Admission Requirements (prerequisites) if any :

### I. General Requirements:

- Master degree in Ophthalmology

### II. Specific Requirements:

- Fluent in English (study language)

## VACATIONS AND STUDY LEAVE

The current departmental policy is to give working assistant lecture 3 week leave prior to first/ second part exams.

### FEES:

As regulated by the postgraduate studies rules and approved by the faculty vice dean of post graduate studies and the faculty and university councils.

## 8-Progression and completion requirements

- + Examinations of the first part (Medical statistic, Research methodology and Medicolegal Aspects and Ethics in Medical Practice and Scientific Research) could be set at 6 months from registering to the MD degree.
- + Students are allowed to sit the exams of the remaining essential courses of the first part after 12 months from applying to the MD degree.
- + Examination of the second part cannot be set before 4 years from registering to the degree.
- + Discussion of the MD thesis could be set after 2 years from officially registering the MD subject, either before or after setting the second part exams.
- + The minimum duration of the program is 4 years.

### **The students are offered the degree when:**

1. Passing the exams of all basic science, elective and speciality courses of this program as regulated by the post graduates approved rules by the faculty council.
2. Completing all scheduled CP and log book (minimum 80%).
3. Discussion and acceptance of the MD thesis.
4. Acceptance or publication of one research from the thesis in international indexed medical journals or publication of 2 researches from the thesis in local specialized medical journals.



## 9-Program assessment methods and rules (Annex IV)

<b>Method</b>	<b>ILOs measured</b>
<b>Written examinations: Structured essay questions Objective questions MCQ Problem solving</b>	<b>K &amp; I</b>
<b>Clinical: Long/short cases OSCE</b>	<b>K ,I, P &amp;G skills</b>
<b>Structured oral</b>	<b>K ,I &amp;G skills</b>
<b>Logbook assessment</b>	<b>All</b>
<b>Research assignment</b>	<b>I &amp;G skills</b>

## Weighting of assessments:

Courses		Degrees			
Course	Course code	Written Exam	Oral Exam*	Practical Exam	Total
<b>First Part</b>					
Basic science courses:					
Medical statistics	FAC309A	35	15		50
Research Methodology	FAC309B	35	15		50
Medicolegal Aspects & Ethics in Medical Practice and Scientific Research	FAC310C	35	15		50
Eye Anatomy, Physiology, Pathology , Microbiology & Optics and refraction	OPH326A	180	170		350
Total of the first part					500
<b>Second Part</b>					
	Course code	Written	Oral *	Practical / Clinical Exam	total
Speciality Courses		570		630	
Course 4 Ophthalmology Paper 1(Eye Medicine)	OPH326B		390	240	1200
Paper 2(Eye Surgery)		150			
Paper3(Commentary)		150			
Paper4(Eye Medicine and Surgery)		120			
Total of The second part		570	390	240	1200
Elective course 1		50		50	100
Elective course 2		50		50	100

\* 25% of the oral exam for assessment of logbook

\* 25% of the oral exam for assessment of logbook

**500 marks for first part**

**1200 for second part**

**Written exam 47.5% (570 marks).**

**Clinical/practical and oral exams 52.5% 630 marks**

**Elective courses 200**

## Examination system:

### ➤ First part:

- Written exam 2 hours in Medical Statistics and Research Methodology + oral examination
- Written exam 1 hours in Medicolegal Aspects and Ethics in Medical Practice and Scientific Research + oral examination
- Written exam 3 hours in Eye Anatomy, Physiology, Pathology , Microbiology & Optics and refraction+ oral exam

### ➤ Second part:

- Written exam four papers 3 hours for each in Ophthalmology( Eye Medicine , Eye Surgery, Commentary and Eye Medicine &Surgery) + Oral exam+ Clinical/Practical exam.

### ➤ Elective courses

- Written exam one paper 1 hour in Elective course 1 + Oral & Practical exam
- Written exam one paper 1 hour in Elective course 2 + Oral & Practical exam.

## 10-Program evaluation

By whom	Method	Sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s):According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	Questionnaires	#
Alumni	Questionnaires	#

**#Annex 5 contains evaluation templates and reports (Joined in the departmental folder).**

## 11-Declaration

**We certify that all of the information required to deliver this program is contained in the above specification and will be implemented.**

**All course specifications for this program are in place.**

Contributor	Name	Signature	Date
<b>Program Principle Coordinator:</b>	<b>Prof. Mohamad Saad Abdel-Rahman</b>		<b>4-2022</b>
<b>Head of the Responsible Department (Program Academic Director):</b>	<b>Prof. Mohamed Sayed Saad</b>		<b>4-2022</b>

# Annex 1, Specifications for Courses / Modules

## Annex 1: specifications for courses/ modules

### First Part

- 1) Course 1: Medical Statistics and computer
- 2) Course 2: Research Methods
- 3) Course 3: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research
- 4) Course 4: Eye Anatomy, Physiology, Pathology , Microbiology& Optics and refraction

### Course 1: Medical statistics

***Name of department: Public Health and Community Medicine***

***Faculty of medicine***

***Assiut University***

***2022-2023***

#### 1. Course data

- + Course Title: Medical statistics
- + Course code: FAC309A
- + Specialty: offered to all clinical and academic specialties
- + Number of credit points: 1 credit point
- + Department (s) delivering the course: Pubic Health and Community Medicine
- + Coordinator (s):
  - Course coordinator: Prof. Farag Mohammed Moftah
  - Assistant coordinator (s):  
Prof. Medhat Araby Khalil Saleh
- + Date last reviewed: January -2022
- + Requirements (pre-requisites) if any:
  - Completed Master degree in any of the academic or clinical departments of Medicine.

## 2. Course Aims

Enable graduate students to use statistical principles to improve their professional work and develop the concept of critical interpretation of data

## 3. Intended learning outcomes (ILOs): To be able to use statistical principals to manage data

### A knowledge and understanding

ILOS	Methods of teaching/ learning	Methods of Evaluation
A. List the types of variables	Lecture and discussion	Written examination
B. Identify the methods of data collection	Lecture and discussion	Written examination
C. Describe the different sampling strategies	Lecture and discussion	Written examination
D. Identify types of tabular and graphic presentation of data	Lecture and discussion	Written examination
E. Identify measures of central tendency and dispersion	Lecture and discussion	Written examination
F. Identify the characters of normal distribution curve.	Lecture and discussion	Written examination
G. Detect the difference between parametric and non-parametric tests	Lecture and discussion	Written examination
H. Identify the concepts of correlation and regression	Lecture and discussion	Written examination

## B. intellectual

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Describe the normal curves.	Lecture & Discussions	Written examination
B. Describe and summarize data	Lecture & Discussions	Written examination
C. Select the proper test of significance	Lecture & Discussions	Written examination
D. Interpret the proper test of significance	Lecture & Discussions	Written examination
E. Describe the difference between parametric and non-parametric tests	Lecture & Discussions	Written examination

## C. Practical skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design data entry files.	Tutorial on SPSS	Assignments SPSS exam
B. Validate data entry.	Tutorial on SPSS	Assignments SPSS exam
C. Manage data files.	Tutorial on SPSS	Assignments SPSS exam
D. Construct tables and graphs.	Tutorial on SPSS	Assignments SPSS exam
E. Calculate measures of central tendency and dispersion.	Tutorial on SPSS	Assignments SPSS exam
F. Select, apply and interpret the proper test of significance.	Tutorial on SPSS	Assignments SPSS exam



## D general skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Appraise scientific evidence	Discussions	Research assignment
B. Use information technology to manage information, access on-line medical information; for the important topics.	tutorial	Research and audits' assignment

**4. Course contents (topic s/modules/rotation  
Course Matrix**

**Time Schedule: First Part**

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Introduction	A-F	A-D	-	A&B
Tables and graphics	D	A-D	-	A&B
Sampling	C	-	-	A&B
Methodology of data collection	B	-	-	A&B
Type of variables	A	-	-	A&B
Proportion test& Chi-square test	E,F	C&D	-	A&B
Student T test& Paired T test	E,F	C&D	F	A&B
ANOVA test	E,F	C&D	F	A&B
Non parametric tests	E,F	C&D	F	A&B
Discrimination analysis factor analysis	E,F	C&D	-	A&B
SPSS Introduction	A-F	A-D	-	A&B
Data entry and cleaning of data	A	A-D	A-C	A&B
Transforming of variables	A	A&B	A-C	A&B
Descriptive statistics	D	A-D	D&E	A&B
Graphic presentation	D	A&B	D	A&B
Chi square and interpretation of results	E,F	C&D	F	A&B
Correlation Regression	E,F	C&D	F	A&B
Multiple and logistic Regression	E,F	C&D	F	A&B

## 5. Course Methods of teaching/learning

1. Lectures
2. Assignments
3. Discussions
4. Exercises
5. Tutorial on SPSS v.16

## 6. Course assessment methods:

### i. Assessment tools:

1. Attendance and active participation
2. Assignment
3. Practical SPSS examination
4. Written exam

ii. **Time schedule:** After 6 months from applying to the M D degree.

iii. **Marks:** 50 (35 for written exam and 15 for practical exam).

## 7. List of references

### i. Lectures notes

Department lecture notes

### ii. Essential books

- Medical Statistics: Book by Ramakrishna HK 2016
- Janet Peacock and Philip Peacock. Oxford Handbook of Medical Statistics (second edition.) Publisher: Oxford University Press, Print Publication Date: Nov 2010 Print ISBN-13: 9780199551286, Published online: Jun 2011. DOI: 10.1093/med/9780199551286.001.0001
- Leslie E. Daly MSc, PhD, Hon MFPHM,, Geoffrey J. Bourke MA, MD, FRCPI, FFPHM, FFPHMI, Interpretation and Uses of Medical Statistics, Fifth Edition, First published:1 January 2000, Print ISBN:9780632047635 |Online ISBN:9780470696750 |DOI:10.1002/9780470696750
- Marcello Pagano, Kimberlee Gauvreau: Principles of Biostatistics second edition published in 2000 by Brooks/Cole and then Cengage Learning. CRC Press, Feb 19, 2018 - Mathematics - 584 pages.

### iii- Recommended books

- Ji-Qian Fang (Sun Yat-Sen University, China) Handbook of Medical Statistics: <https://doi.org/10.1142/10259> | September 2017.Pages: 852

- Robert H. Riffenburgh: Statistics in Medicine 4th Edition (2020). EvidenceBased Medicine How to practice and teach EBM.
- Discovering Statistics Using IBM SPSS Book by Andy Field, 2013.

**iii. Periodicals, Web sites, etc**

iv. **Periodicals , etc** Statistics in Medicine - Wiley Online Library

v. **Web sites** <https://www.phc.ox.ac.uk/research/medical-statistics>

## 8. Signatures

<b>Course Coordinator:</b> - Farag Mohammed Moftah	<b>Head of the Department:</b> - Prof. Eman Morsy Mohamed
<b>Date:</b> 10-1-2022	<b>Date:</b> 10-1-2022
<b>Associated Coordinator:</b> Prof. Medhat Araby Khalil Saleh	
<b>Date:</b> 10-1-2022	

## Course 2: Research Methodology

**Name of department:** *Public Health and Community Medicine Faculty of medicine*  
**Assiut University**  
**2021-2022**

### 1. Course data

-  **Course Title:** Research methodology
-  **Course code:** FAC309B
-  **Specialty:** Offered to all clinical and academic specialties
-  **Number of credit points:** 1 credit point
-  **Department (s) delivering the course:** Department of public health
-  **Coordinator (s):**
  - **Course coordinator:** Prof. Mahmoud Attia
- Assistant coordinator (s):** Prof. Ekram Mohamed
  - Prof. Medhat Araby Khalil
-  **Date last reviewed:** January 2022
-  **Requirements (prerequisites) if any:**
  - **Completed Master degree in any of the academic or clinical departments of Medicine.**

## 2. Course Aims

To provide graduate students with the skills of:

- planning and implementing sound research
- writing a scientific research proposal

## 3. Intended learning outcomes (ILOs)

### A knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Explain differences between different study designs.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
B. Identify sources and types of bias in research.	Lecture and discussion Practical sessions	Written exam Log book assignments Practical exam
C. Identify methods of data collection.	Lecture and discussion Practical sessions	Written exam Log book assignments
D. Select and design valid measurement tools for research.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
E. Explain ethical issues in conducting research on human subjects.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
F. List the steps involved in proposal writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments Practical exam
G. Identify a research problem within a conceptual framework.	Lecture Discussion	Written exam Log book assignments Practical exam

H. Use the web sources to do a literature search	Practical tutorial on web	Log book assignment
I. Describe the rules of authorship in scientific writing.	Lecture and discussion Practical sessions Workshops	Written exam Log book assignments
J. Select the appropriate study design for the research question.	Lecture Practical sessions	Written exam Practical exam
K. Minimize bias in designing research.	Lecture	Written exam
L. Screening & theoretical background	Lectures	Written exam Practical exam
M. Mention the basic ethics for conducting a research and medicolegal principles relevant to data confidentiality.	lectures seminar	Written exam Practical exam

## B. intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Apply basic science & knowledge for appraising scientific literature.	Discussions & seminars	Written exam Practical exam
B- Design research and present study data, in seminars.	lecture seminar	log book assignments
C- Design suitable epidemiological study.	lecture seminar	log book assignments
D- Design strategies for resolving ethical concerns in research, law, and regulations.	lecture Workshops	Written exam log book assignments
E- Apply coherently synthesize ideas and integrate lateral and vertical thinking.	lecture Workshops	log book assignments
F- Evaluate screening tests and interpreting their uses in different population.	lecture	Written exam Practical exam

## C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A- Conduct epidemiological studies, screening and surveys.	lectures seminar	written exam log book assignments
B- Identify steps required in fielding the study.	Lecture	Assignments Written exam
C- Managing data collection team.	lectures seminar	log book assignments
D- Identify steps required for calculation sensitivity, specificity, positive predictive value, negative predictive value, accuracy of a screening test.	Lecture Practical sessions	Assignments Written exam Practical exam
E- Be able to define and apply the epidemiologic criteria of causality and be able to distinguish between a measure of association and evidence of causality.	Lecture Practical sessions	Assignments Written exam Practical exam
F- Synthesize information from multiple sources for research writing and the ability to perform paper critique .	Lecture Practical sessions	Assignments Written exam Practical exam
G- Identify bias and confounding in epidemiological study designs, their types and ways to control them in various types of biases.	Lecture Practical sessions	Assignments Written exam Practical exam



## D General skills

### Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A- Scientific paper and proposal writing skills: be able to write an introduction, objectives and the methodological section.	Tutorial	Written examination
B- Learn authorship ethical rules.	Tutorial	Written examination
C- Perform practice-based improvement activities using a systematic methodology (audit, logbook, critical appraisal)	- Lectures - Practical sessions - Discussion - Readings	critical appraisal
D- Appraise evidence from scientific studies(journal club)	- Lectures - Practical sessions - Discussion - Readings	critical appraisal
E- Conduct epidemiological studies, screening and surveys.	- Lectures - Practical sessions - Discussion - Readings	attendance and participation
F- Facilitate training of junior students and other health care professionals in different screening activities.	Field work Participation in projects	attendance and participation

### Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
G- Maintain ethically sound relationship with community members.	- Lectures - Practical sessions - Discussion - Readings	Written exams
H- Provide information using effective nonverbal, explanatory, questioning, and writing skills.	- Lectures - Practical sessions - Discussion - Readings	Written exams Practical exams
I- Present results of researches in seminars.	- Lectures - Practical sessions - Discussion - Readings	Log book assignments

### Professionalism

ILOs	Methods of teaching/ learning	Methods of Evaluation
J- Demonstrate respect, compassion, and integrity to the needs of society.	- Lectures - Discussion - Readings	Written exams
K- Manage potential conflicts of interest encountered by practitioners, researchers, and organizations.	- Lectures - Discussion - Readings	Written exams
L- Design strategies for resolving ethical concerns in research, law, and regulations.	Lectures - Discussion - Readings	Written exams Practical exams
M- Demonstrate ways to control for confounding in the analysis phase of a study	Lectures - Discussion - Readings	Written exams Practical exams
N- Demonstrate a commitment to ethical principles including confidentiality of participants' information and informed consent.	Lectures - Discussion - Readings	Written exams
O- Assess ethical considerations in developing communications and promotional initiatives.	- Lectures - Discussion - Readings	Written exams

**4. Course contents (topic s/modules/rotation  
Course Matrix**

**Time Schedule: First Part**

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skills C	General Skills D
Over view on research conduction and research ethics	A&E	A-D	A-C	C-G, I,L&M-O
How to write a research proposal	F,I	E	F	A-C&H
Observational study design	A& D	B & C	D	E & F
Experimental study design	A& D	B & C	B	E & F
Evaluation of diagnostic tests (Screening )	L	A	B& E	F
Systematic reviews and meta analysis	G, H & M	E& F	F	C, D
Confounding, bias & effect modification	B & K	D	E & G	M

**5. Course Methods of teaching/learning:**

1. Lectures
2. Assignments
3. Discussion
4. Exercises

**6. Course assessment methods:**

**i. Assessment tools:**

1. Attendance and participation
2. Log book assignments
3. Written examination

4. Practical examination

ii. **Time schedule:** After 6 months from applying to the M D degree.

iii. **Marks:** 50 (35 for written exam and 15 for practical exam).

## 7. List of references

### i. Lectures notes

- Department lecture notes

### ii. Essential books

- Research Design: Qualitative, Quantitative and Mixed Methods Approaches 4th Edition by John W. Creswell SAGE Publications, Inc; 4th edition (January 1, 2014)
- Research methodology: A step – by – step Guide for Beginners. Ranjit Kumar, 2020. Second edition <https://books.google.com.eg/books?>
- Medical Research Essentials Rania Esteitie, McGraw Hill Professional, third edition, Feb 5, 2014 - Medical - 104 pages
- Research Methodology in the Medical and Biological Sciences Petter Laake, Haakon Breien Benestad, Bjorn R. Reino Olsen, 4th edition , Academic Press, Nov 5, 2007 - Science - 512 pages

### iv. Recommended books

- Research Methods in Education 7th Edition, by Louis Cohen, Lawrence Manion, Keith Morrison Publisher: Routledge; (April 22, 2011) [www.routledge.com/textbooks/cohen7e](http://www.routledge.com/textbooks/cohen7e).
- Research Methodology: A Practical and Scientific Approach Vinayak Bairagi, Mousami V. Munot · 2019, Research Methodology: A Practical and Scientific Approach - Google Books
- Based Medicine How to practice and teach EBM. David Sachett, Sharon E. Straus, W. Scott Richardson , William Rosenberg R. Brain Haynes
- Dissertation workshop open courseware JHSPH

## 8. Signatures

**Course Coordinator:**

Prof. Mahmoud Attia

**Head of the Department:**

Prof. Eman Morsy Mohamed

## Course 3: Medico legal Aspects and Ethics in Medical Practice and Scientific Research

***Name of department:***

***Forensic medicine and clinical toxicology***

***Faculty of medicine***

***Assiut University***

**2016-2017**

### 1. Course data

- + Course Title: Medicolegal Aspects and Ethics in Medical Practice and Scientific Research**
- + Course code: FAC310C**
- + Speciality: General and special surgery (1<sup>st</sup> part),**
- + Number of credit points: 1 credit point**
- + Department (s) delivering the course: Forensic Medicine and Clinical Toxicology**
- + Coordinator (s):**
- + Course coordinator:**  
Prof. Ghada omran
- + Date last reviewed: September 2017**
- + Requirements (prerequisites) if any :**
  - Completed Master degree**

## 2. Course Aims

To describe the basic ethical and medicolegal principles and bylaws relevant to practice in the field of General and special surgery  
Rheumatology

## 3. Intended learning outcomes (ILOs):

### A. knowledge and understanding

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Mention principals of writing consent forms.	Lecture and discussion	Written & oral exam
B. Mention principals of Writing a death certificate	Lecture and discussion	Written & oral exam
C. Explain principals of medical reports.	Lecture and discussion	Written & oral exam
D. Mention principals of Dealing with wounds.	Lecture and discussion	Written & oral exam
E. Mention principals of firearm injuries.	Lecture and discussion	Written & oral exam
F. List indications of induced emesis, gastric lavage and samples collection.	Lecture and discussion	Written & oral exam

## B. Intellectual

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case , seminars in death certificate	Lecture and discussion	Written & oral exam
B. Design and present case, seminars in toxicological cases	Lecture and discussion	Written & oral exam

## C. Practical skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Identify medical ethics and ethics in research.	Lecture and discussion	Discussion
B. Prepare and write consent.	Lecture and discussion	Discussion
C. Identify medical responsibilities.	Lecture and discussion	Discussion
D. Write death certificate.	Lecture and discussion	Discussion and active participation
E. Deal with a case of Suspicious death	Lecture and discussion	Discussion and active participation
F. Write medical reports	Lecture and discussion	Discussion and active participation
G. Identify types of wounds and deal with them.	Lecture and discussion	Discussion and active

		participation
H. Identify types, distance and direction of firearm wounds and deal with them	Lecture and discussion	Discussion and active participation
I. Elicit death associated with surgical anesthesia.	Lecture and discussion	Discussion and active participation
J. Perform gastric lavage, induce emesis, and obtain samples	Lecture and discussion	Discussion and active participation

### D. General Skills

Competency and Skills	Methods of teaching/ learning	Methods of Evaluation
A. Present a case.	Lecture and discussion	Global rating logbook
B. Write a consultation note	Lecture and discussion	Global rating logbook
C. Inform patients and maintaining comprehensive.	Lecture and discussion	Global rating logbook
D. Make timely and legible medical records	Lecture and discussion	Global rating logbook
E. Acquire the teamwork skills	Lecture and discussion	Global rating logbook



## 4. Course contents (topic s/modules/rotation Course Matrix

### Time Schedule: First Part

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
	A	B	C	D
1. Death and death certificate.	B	A	D	
2. Suspicious death	B		E	B
3. Death associated with surgical anesthesia	B		I	B
4. Medical reports	C	B	F	A,D,E
5. Toxicological Reports	F	B	J	A,E
6. Wounds	D		G	B
7. Firearm injuries	E		H	B
8. Ethics in research			A	
9. Medical ethics.	A		A,B,C	C,E

## 5. Course Methods of teaching/learning:

1. Lectures.
2. Discussions.
3. Exercises.

## 6. Course assessment methods:

### i. Assessment tools:

1. Written examination.
2. Attendance and active participation.
3. Oral examination.

ii. **Time schedule:** After 6 months from applying to the M D degree.

iii. **Marks:** 50 (35 for written exam and 15 for oral exam).

## 7. List of references

### i. Lectures notes

- Course notes.
- Staff members print out of lectures and/or CD copies.

### ii. Essential books

- Bernard Knight and Pekka Saukko (2015: Knight Forensic Pathology. Hodder Arnold press
- Goldfrank, Lewis R.; Howland, Mary Ann; Hoffman, Robert S.; Nelson, Ewis S.; Lewin, Neal A (2019): Goldfrank's Toxicologic Emergencies, 11<sup>th</sup> ed. McGraw Hill / Medical.
- Medical Ethics Manual. World medical association. Third edition 2015.
- Medical ethics and law. [Dominic Wilkinson](#), 3<sup>rd</sup> edition 2019.

### iii. Recommended books

- Biswas Gautam (2021): Review of Forensic Medicine & Toxicology. 5<sup>th</sup> ed. Jaypee Brothers Medical Pub.

### iv. Journal and web site

- Journals of all Egyptian Universities of Forensic Medicine and Clinical Toxicology.
- All International Journals of Forensic Medicine and Clinical Toxicology which available in the university network at [www.sciencedirect.com](http://www.sciencedirect.com). As :
  - Forensic Science International Journal.
  - Toxicology Letter.

### v. others

## 8. Signatures

<b>- Course Coordinator:</b> Prof. Prof. Ghada omran	<b>- Head of the Department:</b> Prof. Randa Hussein Abdelhady
<b>Date:</b> September 2017	<b>Date:</b> September 2017

## Course 4: Eye Anatomy, Physiology, Pathology, Microbiology & Optics and refraction










### ***Ophthalmology department:***

***Faculty of medicine***

***Assiut University***

***2021-2022***

### **1. Course data**

-  **Course Title: Eye Anatomy, Physiology, Pathology, Microbiology & Optics and refraction**
-  **Course code: OPH326A**
-  **Speciality Ophthalmology**
-  **Number of credit points: 7 credit point for didactic**
-  **Department (s) delivering the course: Department Ophthalmology - Faculty of Medicine- Assiut- EGYPT**
-  **Course coordinator(s):**
  - Course coordinator:  
*Prof. Mohamed Saad Abdelrahman*
  - Assistant coordinator (s):  
*Dr. Mahmoud Abdel Radi*  
*Dr. Ahmed Abdel-Naser*
-  **Date last reviewed: April 2022**
-  **Requirements (prerequisites) if any :**
  - **None**
-  **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

## 2. Course Aims

1. To acquire indepth the Eye Anatomy, Physiology, Pathology, Microbiology& Optics and refraction background necessary for Ophthalmology in clinical reasoning, diagnosis and management of Ophthalmology disorders.

## 3. Intended learning outcomes (ILOs):

### Course 4: Unit 1 Eye Anatomy

#### A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Describe details of:  <u>Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</u></p> <ul style="list-style-type: none"> <li>• Cornea</li> <li>• Refractive media</li> <li>• Ciliary body</li> <li>• lens</li> <li>• Conjunctiva</li> </ul> <p><u>GLAUCOMA</u></p> <ul style="list-style-type: none"> <li>• Ciliary body</li> <li>• Ciliary processes</li> <li>• Anterior chamber angle</li> <li>• Sclera and episcleral structures</li> <li>• Conjunctiva</li> <li>• Optic nerve structure</li> <li>• Optic nerve vasculature</li> <li>• Anatomy of the macula</li> </ul>	-Lectures	-Written and oral examination - Log book

## Cataract

- Lens
- Vitreous
- Ciliary body
- Iris
- choroid

## Uveites

- Iris
- Ciliary body
- Choroids
- Retina

## Eye in systemic diseases

- Orbit
- Retina
- Vitreous
- Uveal tract

## Neuro-Ophthalmology

- neuro-anatomy of the visual pathways
- neuro-anatomy of the cranial nerves
- pupillary and accommodative neuro-anatomy
- ocular motility and related neuronal pathways

## Oculoplastic Surgery and Orbit

More advanced anatomy of:

- Eyelids
- lacrimal glands ,
- lacrimal drainage system
- orbit
- orbital vascular system-

## vitreo retinal diseases

- Retina
- Uveal tract
- vitreous
- Ocular circulation

## Pediatric ophthalmology & Strabismus

<ul style="list-style-type: none"> <li>• Retina</li> <li>• Uveal tract</li> <li>• vitreous</li> <li>• Ocular circulation</li> </ul> <p><u>Pediatric ophthalmology &amp; Strabismus</u></p> <ul style="list-style-type: none"> <li>• Infantile Ocular anatomy</li> <li>• Visual pathway</li> <li>• Congenital anomalies of the retina and vitreous</li> </ul> <p><u>Oncology</u></p> <ul style="list-style-type: none"> <li>• Different ocular tissues gross and minute anatomy-</li> </ul>		
--	--	--

### B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Apply the basic (anatomical) supportive sciences which are appropriate to Ophthalmology related problems.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Ophthalmology.		

### C- Practical skills

Practical: 0 credit point

## D-General Skills

### Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Log book Oral exam

### Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A	-Clinical round -Seminars -Lectures	-Log book - Oral exam -Chick list

### Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	- Observation and supervision Written & oral communication	Logbook Oral Exam

## Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems.	-Observation -Senior staff experience	1. 360o global rating

## Course 4: Unit 2 Physiology

### A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Describe details of: <u>Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</u></p> <ul style="list-style-type: none"> <li>● Precorneal tear film</li> <li>● Tears</li> <li>● Tear secretion basic and reflex</li> <li>● Accommodation</li> <li>● Cornea ,external diseases and refractive surgery</li> <li>● Corneal sensation</li> <li>● Corneal edema</li> <li>● Low vision</li> </ul> <p><u>GLAUCOMA</u></p> <ul style="list-style-type: none"> <li>● Aqueous humor composition</li> <li>● Aqueous Formation</li> <li>● Biodynamics of Aqueous</li> <li>● Ocular circulation</li> <li>● IOP</li> </ul> <p><u>Cataract</u></p> <ul style="list-style-type: none"> <li>● Lens</li> </ul>	-Lectures	-Written and oral examination - Log book



- Ciliary body
- iris

#### Uveitis

- aqueous humour
- Vitreous
- Uveal circulation

#### Eye in systemic diseases

- Retinal circulation
- Uveal tract blood vessels & circulation
- Vitreous

#### Neuro-Ophthalmology

- types of ocular motility
- ocular motility control
- sympathetic innervation
- parasympathetic innervation

#### Oculoplastic Surgery and Orbit

- physiology of the Lid and conj
- physiology of the lacrimal apparatus, secretory and drainage parts

#### vitreo retinal diseases

- Retina
- Vitreous
- Choroids
- Sclera
- Ocular circulation

#### Pediatric ophthalmology & Strabismus

- Retina
- Vitreous
- Choroids
- Sclera
- Ocular circulation

#### ophthalmology & Strabismus

- Sensory adaptation
- Ocular motility

<u>Ocular Oncology</u> <ul style="list-style-type: none"> <li>• Retina</li> <li>• Vitreous</li> <li>• Choroids</li> <li>• Sclera</li> <li>• <u>Ocular circulation</u></li> </ul>		
--	--	--

### B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Apply the basic (Physiological) supportive sciences which are appropriate to Ophthalmology related problems.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Ophthalmology.		

### C- Practical skills

Practical: credit point

### D-General Skills

### Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Log book Oral exam

## Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A	-Clinical round -Seminars -Lectures	-Log book -Oral exam -Chick list

## Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	- Observation and supervision Written & oral communication	Logbook Oral Exam

## Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems.	-Observation -Senior staff experience	1. 360o global rating

**Course 4: Unit 3 Pathology and  
microbiology**

**A-Knowledge and understanding**

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Describe pathological details of:  <u>Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</u>            Microbial keratitis with contact lens wearers-            laser refractive surgery            low vision causes  <u>Cornea ,external diseases and refractive surgery</u></p> <ul style="list-style-type: none"> <li>• Lid inflammations</li> <li>• Lid tumours</li> <li>• Conj infections</li> <li>• Conj inflammations</li> <li>• Conj degeneration</li> <li>• Corneal ulcerative and non ulcerative lesions</li> </ul> <p><u>GLAUCOMA</u></p> <ul style="list-style-type: none"> <li>• Angle pathology in glaucoma</li> <li>• microbiology of IO infection</li> </ul> <p><u>Cataract</u></p> <ul style="list-style-type: none"> <li>• Iritis</li> <li>• Parsplanitis</li> <li>• Vitritis</li> </ul> <p><u>Eye in systemic diseases</u></p> <ul style="list-style-type: none"> <li>• Different types of retinopathies</li> <li>• Different types of orbitopathies</li> </ul> <p><u>Neuro-Ophthalmology</u></p> <ul style="list-style-type: none"> <li>• Visual pathway</li> <li>• Myasthenia gravis</li> <li>• Optic neuropathies</li> </ul>	<p>-Lectures</p>	<p>-Written and oral examination            - Log book</p>

<p><u>Oculoplastic Surgery and Orbit</u></p> <ul style="list-style-type: none"> <li>• Orbital inflammations</li> <li>• Lacrimal gland disorders</li> <li>• lacrimal drainage system canalicui ,sac , duct</li> </ul> <p><u>vitreo retinal diseases</u></p> <ul style="list-style-type: none"> <li>• Retinopatheies</li> <li>• Maculopathies</li> <li>• Intraocular infections</li> <li>• Retinitis of prematurity</li> <li>• Cryo burn</li> <li>• Diathermy burn</li> </ul> <p><u>Pediatic ophthalmology &amp;Strabismus</u></p> <ul style="list-style-type: none"> <li>• Retinopatheies</li> <li>• Maculopathies</li> <li>• Intraocular infections</li> <li>• Retinitis of prematurity</li> <li>• Cryo burn</li> <li>• Diathermy burn</li> </ul> <p><u>Pediatic ophthalmology &amp;Strabismus</u></p> <ul style="list-style-type: none"> <li>• ROP</li> <li>• Retinoblastoma</li> </ul> <p><u>Ocular Oncology</u></p> <ul style="list-style-type: none"> <li>• Describe the classification of retinoblastoma</li> <li>• Benign and malignant melanomas</li> </ul>		
<p>B. Mention Microbiological details of :  <u>Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</u>  Contact lens preservative solutions  Microbial keratitis with contact lens weares-  keratitis with laser surgery  <u>Cornea ,external diseases and refractive surgery</u></p> <ul style="list-style-type: none"> <li>• Lid infections</li> <li>• Conj infections chlamydial bacterial viral</li> <li>• Corneal infections bacterial viral fungal</li> </ul>		

GLAUCOMA

- microbiology of IO infection

Cataract

- Iritis
- Parsplanitis
- Vitritis
- -IO infections

Eye in systemic diseases

- Septicemias
- Orbital cellulites
- Septic retinitis
- Intraocular infections

Neuro-Ophthalmology

- Meningitis

Oculoplastic Surgery and Orbit

- Orbital cellulites
- Lacrimal adenitis
- Canaliculitis
- dacryocystitis

vitreo retinal diseases

- Intraocular infections

Pediatric ophthalmology & Strabismus

- Intraocular infections

Pediatric ophthalmology & Strabismus

- Intraocular infections

Ocular Oncology

- Intraocular infections

## B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Apply the basic (Pathology and Microbiology) supportive sciences which are appropriate to Ophthalmology related problems.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Ophthalmology.		

## C- Practical skills

Practical: 0 credit point

## D-General Skills

### Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Log book - Oral exam

## Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A and A.B	-Clinical round -Seminars -Lectures	-Log book - Oral exam -Chick list

## Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	- Observation and supervision Written & oral communication	Logbook Oral Exam

## Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems.	-Observation -Senior staff experience	1. 360o global rating



**Course 4: Unit 3 Optics and Refraction**

**A-Knowledge and understanding**

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Describe details of:  <b>Lens formula.</b></p> <ul style="list-style-type: none"> <li>• Formation of the image.</li> <li>• Vergence of light (diopter, convergence, divergence, vergence formula).</li> <li>• Concave and convex.</li> <li>• Magnification (linear, angular, relative size, electronic).</li> <li>• Spherical decentration and prism power.</li> <li>• Lens form.</li> <li>• Binocular balancing.</li> <li>• Refracting the basic low vision patient.</li> </ul> <p><b>Astigmatic lenses.</b></p> <ul style="list-style-type: none"> <li>• Cylindrical lenses.</li> <li>• sphero-cylinder lenses and surfaces.</li> <li>• cross cylinders (e.g., Jackson cross cylinder).</li> <li>• Maddox rod.</li> <li>• Toric lenses.</li> <li>• Conoid of Sturm.</li> </ul> <p><b>Notation of lenses.</b></p> <ul style="list-style-type: none"> <li>• Spectacle prescribing.</li> <li>• Simple transposition.</li> <li>• Toric transposition.</li> </ul> <p><b>Notation of prisms</b></p> <ul style="list-style-type: none"> <li>• Optics of prisms</li> <li>• Uses of prisms</li> <li>• Identification of prisms</li> </ul>	<p>-Lectures</p>	<p>-Written and oral examination                      - Log book</p>

**Identification of unknown lenses.**

- Neutralization.
- Focimeter.
- Geneva lens measure.

**Aberrations of lenses.**

- Correction of aberrations relevant to the eye (spherical, coma, astigmatism, distortion, pantoscopic tilt).
- Duochrome test.

**Lens materials.**

- hard lenses
- soft lenses

**Clinical optics.**

- Transmittance of light by the optic media.
- Schematic and reduced eye.
- Pupillary response and its effect on the resolution of the optical system (Stiles-Crawford effect)

**Visual acuity.**

- Distance and near acuity measurement.
- Minimal (visible, perceptible, separable, legible).
- Vernier acuity.
- Contrast sensitivity.
- Catoptric images.
- Emmetropia.
- Accommodation.
- Purkinje shift.
- Pinhole.

**Ametropia.**

- Myopia.
- Hypermetropia (hyperopia).
- Astigmatism.
- Anisometropia.

- Aniseikonia (Knapp's rule).
- Aphakia.

**Optical parameters affecting retinal image size.**

**Accommodative problems.**

- Insufficiency.
- Excess.
- AC/A ratio.

**Refractive errors.**

- Prevalence.
- Inheritance.
- Changes with age.
- Surgically induced.

**Correction of ametropia.**

- Spectacle lenses.
- Contact lenses.
- Intraocular lenses.
- Principles of refractive surgery.

**Problems of spectacles in aphakia.**

- Effect of spectacles and contact lens correction on accommodation and convergence (amplitude, near point, far point).
- Effective power of lenses.
- Back vertex distance.
- Spectacle magnification.

**Calculation of intraocular lens power.**

**Presbyopia (measuring for near adds).**

**Low vision aids.**

- High reading addition.
- Magnifying lenses.
- Telescopic aids -Galilean telescope, Keplerian telescope.

**Clinical refraction.**

- Retinoscopy.
- Subjective refraction.

- Measurement of back vertex distance (BVD).
- Muscle balance tests.
- Accommodative power.
- Measurement of interpupillary distance (IPD).
- Decentration of lenses and prismatic effect.
- Best form lens.
- Prescribing multifocal lenses.
- Prescribing for children.
- Cycloplegic refraction.

**Instruments and tests.**

- Direct ophthalmoscope.
- Indirect ophthalmoscope.
- Retinoscope.
- Focimeter.
- Simple magnifying glass (loupe).
- Lensmeter.
- Glare and contrast testing.
- Potential acuity meter.
- Automated refractor.
- Slit lamp biomicroscope (including methods of examination).
- Stereo tests.
- Corneal topographic measurements (placido disc, keratometer, automated corneal topography).
- Applanation tonometer.
- Specular microscope.
- Operating microscope.
- Zoom lens principle.
- Corneal pachymeter.
- Lens screen/Hess chart.
- Synoptophore.
- Lenses used for fundus biomicroscopy

<p>(panfunduscope, Goldmann lens, Hruby lens, 90 diopter lens, etc.).</p> <ul style="list-style-type: none"> <li>• Fundus camera.</li> <li>• Gonioscope.</li> <li>• Tonometers.</li> </ul> <p>Color vision tests (Ishihara color plates; Hardy-Rand-Rittler plates, Farnsworth-Munsell testing).</p>		
--	--	--

### B- Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Apply the basic (Optics and refraction) supportive sciences which are appropriate to Ophthalmology related problems.	Didactic (lectures, seminars, tutorial)	-Written and oral examination -Log book
B. Demonstrate an investigatory and analytic thinking (problem solving) approaches to common clinical situations related to Ophthalmology.		

### C- Practical skills

Practical: 0 credit point

### D-General Skills

### Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Use information technology to manage information, access on-line medical information; and support their own education	-Observation and supervision -Written and oral communication	Log book Oral EXAM

## Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
B. Write a report in common condition mentioned in A.A	-Clinical round -Seminars -Lectures	-Log book - Oral exam -Chick list

## Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
C. Demonstrate a commitment to ethical principles	- Observation and supervision Written & oral communication	Logbook Oral Exam

## Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
D. Work effectively in different health care delivery settings and systems.	-Observation -Senior staff experience	1. 360o global rating

**4. Course contents (topic s/modules/rotation  
Course Matrix**

**Time Schedule: First part**

Topic	Covered ILOs			
	Knowledge	Intellectual	Practical skills	General Skills
	A	B	C	D
<b>(Eye Anatomy)</b>				
Cornea	A	A-B	-	A-D
Conjunctiva	A	A-B	-	A-D
Sclera and episcleral structures	A	A-B	-	A-D
Anterior chamber angle	A	A-B	-	A-D
Iris	A	A-B	-	A-D
Ciliary body and Choroids	A	A-B	-	A-D
Ciliary processes	A	A-B	-	A-D
Lens	A	A-B	-	A-D
Optic nerve structure	A	A-B	-	A-D
Optic nerve vasculature	A	A-B	-	A-D
Retina & vitreous	A	A-B	-	A-D
EOMs	A	A-B	-	A-D
Orbit eyelids and lacrimal system	A	A-B	-	A-D
<b>(Physiology)</b>				
Precorneal tear film	A	A-B	-	A-D
Accommodation	A	A-B	-	A-D
Tears	A	A-B	-	A-D
Corneal sensation	A	A-B	-	A-D
Tear secretion basic and reflex	A	A-B	-	A-D
Aqueous humor composition	A	A-B	-	A-D
Aqueous Formation	A	A-B	-	A-D
Biodynamics of Aqueous	A	A-B	-	A-D
IOP	A	A-B	-	A-D

Lens	A	A-B	-	A-D
Ciliary body	A	A-B	-	A-D
Iris	A	A-B	-	A-D
aqueous humour	A	A-B	-	A-D
-Vitreous	A	A-B	-	A-D
Cornea	A	A-B	-	A-D
Retinal circulation	A	A-B	-	A-D
types of ocular motility	A	A-B	-	A-D
ocular motility control	A	A-B	-	A-D
sympathetic innervation	A	A-B	-	A-D
parasympathetic innervation	A	A-B	-	A-D
Lid and conjunctiva	A	A-B	-	A-D
Lacrimal apparatus, secretory and drainage parts	A	A-B	-	A-D
Retina	A	A-B	-	A-D
Vitreous	A	A-B	-	A-D
Choroids	A	A-B	-	A-D
Sclera	A	A-B	-	A-D
<b>(Pathology &amp; Microbiology)</b>				
Eyelid	A	A-B	-	A-D
Conjunctiva	A	A-B	-	A-D
Cornea	A	A-B	-	A-D
Iris	A	A-B	-	A-D
Lens	A	A-B	-	A-D
Ciliary body	A	A-B	-	A-D
Ciliary processes	A	A-B	-	A-D
Anterior chamber angle	A	A-B	-	A-D
Sclera and episcleral structures	A	A-B	-	A-D
Vitreous	A	A-B	-	A-D
Orbit	A	A-B	-	A-D
Optic nerve	A	A-B	-	A-D
Visual Pathway	A	A-B	-	A-D
Macula	A	A-B	-	A-D



Retina	A	A-B	-	A-D
Choroid	A	A-B	-	A-D
Eye Infections	B	A-B	-	A-D
<b>(Optics &amp; Refraction)</b>				
Lens formula.	A	A-B	-	A-D
Astigmatic lenses.	A	A-B	-	A-D
Notation of lenses.	A	A-B	-	A-D
Notation of prisms	A	A-B	-	A-D
Identification of unknown lenses.	A	A-B	-	A-D
Aberrations of lenses.	A	A-B	-	A-D
Lens materials.	A	A-B	-	A-D
Clinical optics.	A	A-B	-	A-D
Visual acuity.	A	A-B	-	A-D
Ametropia.	A	A-B	-	A-D
Optical parameters affecting retinal image size.	A	A-B	-	A-D
Accommodative problems.	A	A-B	-	A-D
Refractive errors.	A	A-B	-	A-D
Correction of ametropia.	A	A-B	-	A-D
Problems of spectacles in aphakia.	A	A-B	-	A-D
Calculation of intraocular lens power.	A	A-B	-	A-D
Presbyopia (measuring for near ads).	A	A-B	-	A-D
Low vision aids.	A	A-B	-	A-D
Clinical refraction.	A	A-B	-	A-D
Instruments and tests.	A	A-B	-	A-D

**5. Course methods of teaching/learning:**

1. Case taking
2. Observation
3. Senior staff experience

**6. Course methods of teaching/learning: for students with poor achievements**

1. -Extra-lectures and training according to their needs

**7. Course assessment methods:**

**i. Assessment tools:**

- Checklist
- Global rating
- Standardized oral examination
- Written examination
- Logbook

**ii. Time schedule:** After 12 months from applying to the M D degree.

**iii. Marks:** 375

**8. List of references**

**i. Lectures notes**

Staff members print out of lectures and/or CD copies.

**ii. Essential books**

- 1- Anatomy and physiology of the eye 2017
- 2- Adler's physiology of the eye (11<sup>th</sup> edition-2011)
- 3- Clinical Optics (Elkington, 3<sup>rd</sup> edition-1999)
- 4- Ocular Pathology (Yanoff, 7th edition-2014)

**9. Signatures**

<b>Course Coordinator:</b> <i>Prof. Mohamed Saad Abdelrahman</i>	<b>Head of the Department:</b> <i>Prof. Mohamed Sayed Saad</i>
<b>Date:</b> .....	<b>Date:</b> .....

## Second Part

### Course 5 Ophthalmology











#### ***Ophthalmology department:***

***Faculty of medicine***

***Assiut University***

***2021-2022***

#### **1. Course data**

-  **Course Title: Ophthalmology**
-  **Course code: OPH326B**
-  **Speciality Ophthalmology**
-  **Number of credit points:** 147 credit point - didactic 24 credit point (16.3%) - practical 123 credit point (83.7%)
-  **Department (s) delivering the course:** Department Ophthalmology - Faculty of Medicine- Assiut- EGYPT
-  **Coordinator (s)**  
**Course coordinator:** Prof. Mohamad Saad Abdel-Rahman  
**Assistant coordinator (s)** *Dr. Mahmoud Abdel Radi*  
*Dr. Ahmed Abdel-Naser*
-  **Date last reviewed: April 2022**
-  **Requirements (prerequisites) if any :**
  -  **None**
-  **Requirements from the students to achieve course ILOs are clarified in the joining log book.**

## 2. Course Aims

- 1-To enable candidates to master high level of clinical skills, bedside care skills, in addition to update medical knowledge as well as clinical experience and competence in the area of Ophthalmology.
- 2- To demonstrate the ability to provide patient-centered care that is appropriate, compassionate, and effective for treatment of Ophthalmology health problems and the promotion of health.
- 3-To give opportunities to evaluate and manage a broad variety Ophthalmology disorders.

## 3. Course intended learning outcomes (ILOs):

### Unit 1 (Module) Eye Medicine

#### A-Knowledge and understanding

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Explain update and evidence based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <p><u>Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</u></p> <ul style="list-style-type: none"> <li>• Myopia</li> <li>• Hypermetropia</li> <li>• Astigmatism (regular, Irregular, keratoconus)</li> <li>• presbyopia</li> <li>• media opacities</li> </ul> <p><u>contact lenses</u></p> <ul style="list-style-type: none"> <li>• CL complications</li> </ul> <p><u>Refractive surgery</u></p> <ul style="list-style-type: none"> <li>• Patients with low vision</li> <li>• Retinopathies macular diseases optic nerve lesions retinal diseases</li> </ul>	<p>Formal teaching Didactic Lectures tutorial Seminars Journal club Educational prescription Present a case (true or simulated ) in a grand round</p>	<p>Written exam Oral exam Objective structured clinical examination OSCE evaluation of life or recorded performance</p>

### Cornea ,external diseases and refractive surgery

- Red eye
- Corneal ulcers
  - infective bacterial, viral, fungal
  - non infective allergic, degenerative, ischemic
- Corneal opacities superficial and deep
- Inflammatory lesions of the skin of the lid
- Chlazion, stye
- Blepharitis
- lid margin margin deformities (entropion, trichiasis ,ectropion,ptosis)
- Conj. Infections (bacterial,viral,chlamydial allergic spring catarrh ,phlycten)
- Degenerative lesions (pterygium ,pinguecula)
- Xerosis
- Tumours (pigmented, dermolipoma)
- Anterior segment trauma (blunt trauma, perforating, trauma, chemical injuries)

### Glaucoma

- Primary congenital glaucoma
- Primary angle closure glaucoma
- Secondary angle closure glaucoma
- Primary open angle glaucoma
- Secondary open angle glaucoma

### Cataract

- Senile cataract
- Complicated cataract
- Drug induced cataract
- Cataract in systemic diseases

### Uveitis

- Acute anterior and posterior uveitis.
- chronic uveitis
- inflammatory posterior uveitis; masquerade syndromes

### Eye in systemic diseases

- Ocular changes in diabetes
- Ocular changes in Hypertension and atherosclerosis
- Ocular changes in Disthyroid disease

### Neuro-Ophthalmology

- Optic neuropathies

- Ocular motor neuropathies
- Nystagmus
- Pupillary abnormalities
- Visual field defects .
- Myasthenia gravis
- Carotid-cavernous fistula.

#### Oculoplastic Surgery and Orbit

- Common craniosynostoses and other congenital malformations.
- Advanced eyelid, orbital, and lacrimal trauma.
- Epiphora in children
- Canaliculitis, dacryocystitis, acute and chronic dacryoadenitis, preseptal cellulitis, and orbital cellulitis.
- Thyroid ophthalmopathy.

#### vitreo retinal diseases

- Retinal detachment primary and secondary
- macular diseases
  - Age-related macular degeneration (ARMD).
  - Choroidal neovascularization
  - High myopia.
  - Macular holes.
  - Cystoid macular edema.
  - Central serous choroidopathy (retinopathy).
- retinal vascular diseases:
  - Arterial and venous obstructions.
  - Diabetic retinopathy.
  - Hypertensive retinopathy.
  - Peripheral retinal vascular occlusive disease.
  - Acquired retinal vascular diseases.
- Retinal pigment epithelial detachment.
- posterior uveitis syndromes and endophthalmitis

#### Pediatric Ophthalmology & Strabismus

- Amblyopia
- Strabismus in children
- Childhood cataract
- Congenital cataract
- Neonate Ophthalmias
- Dacryocystitis in children

#### Ocular Oncology

<ul style="list-style-type: none"> <li>• Conjunctival tumours.</li> </ul>		
<p>B. Mention the principles of Fluorescein angiography</p> <ul style="list-style-type: none"> <li>• Indocyanine green angiography</li> <li>• Optical coherence tomography</li> <li>• Pentacam</li> <li>• Corneal topography</li> <li>• Pachometry</li> <li>• Perimetry</li> <li>• Electrophysiological tests</li> <li>• Red reflex examination</li> <li>• Streak retinoscope use</li> <li>• Ophthalmic ultrasonography</li> <li>• Keratometer</li> <li>• Contact lens fitting</li> </ul>		
<p>C. Mention basics of the following rare diseases and conditions</p> <p><u>Cornea ,external diseases and refractive surgery</u></p> <ul style="list-style-type: none"> <li>• Corneal dystrophies</li> <li>• Keratoconus</li> <li>• Dermatochalasis,blepharochalasis,blepharofimosis</li> <li>• different types of conjunctival tumours.</li> </ul> <p><u>Glaucoma</u></p> <ul style="list-style-type: none"> <li>• Secondary congenital glaucoma</li> <li>• Traumatic glaucoma</li> </ul> <p><u>Cataract</u></p> <ul style="list-style-type: none"> <li>• Rare types of congenital cataract</li> <li>• Lens abnormalities (e.g., spherophakia, lenticonus, ectopia lentis).</li> </ul> <p><u>Uveitis</u></p> <ul style="list-style-type: none"> <li>• intermediate uveitis pars planitis</li> <li>• masquerade syndromes</li> </ul> <p><u>Eye in systemic diseases</u></p> <ul style="list-style-type: none"> <li>• Ocular changes in Blood diseases</li> <li>• Ocular changes in Collagen diseases</li> <li>• Ocular changes in Connective tissue diseases</li> <li>• Sarcoidosis</li> </ul> <p><u>Neuro-Ophthalmology</u></p> <ul style="list-style-type: none"> <li>• Congenital optic nerve abnormalities (e.g., optic pit, disc coloboma, papillorenal syndrome, morning glory</li> </ul>		

<p>syndrome, tilted disc, optic nerve hypoplasia, myelinated nerve fiber layer, melanocytoma, disc drusen, Bergmeister's papilla).</p> <ul style="list-style-type: none"> <li>• Cavernous sinus and superior orbital fissure syndromes</li> <li>• Carotid-cavernous fistula.</li> </ul> <p><u>Oculoplastic Surgery and Orbit</u></p> <ul style="list-style-type: none"> <li>• Congenital eyelid deformities.</li> <li>• Congenital orbital deformities.</li> <li>• Craniosynostoses.</li> <li>• Lacrimal trauma.</li> <li>• Complicated cases of nasolacrimal duct obstruction,</li> <li>• Orbital inflammatory pseudotumor.</li> <li>• Blepharospasm or hemifacial spasm.</li> <li>• Orbital tumors.</li> </ul> <p><u>Vitreo retinal diseases</u></p> <ul style="list-style-type: none"> <li>• macular diseases <ul style="list-style-type: none"> <li>- Inherited macular dystrophies:</li> <li>- Macular pucker (e.g., epiretinal membrane).</li> <li>- Toxic maculopathies</li> </ul> </li> <li>• Optic pit and secondary serous detachment.</li> <li>• Retinopathy of prematurity.</li> <li>• retinal vascular diseases: <ul style="list-style-type: none"> <li>- Peripheral retinal vascular occlusive disease.</li> <li>- Ocular ischemic syndrome.</li> <li>- Sickle cell retinopathy.</li> </ul> </li> </ul> <p><u>Pediatric Ophthalmology &amp; Strabismus</u></p> <ul style="list-style-type: none"> <li>• Congenital ocular deformities</li> <li>• Congenital anomalies of the retina and vitreous</li> </ul> <p><u>Ocular Oncology</u></p> <ul style="list-style-type: none"> <li>• Eye lid tumours.</li> <li>• Conjunctival tumours.</li> <li>• Ocular tumours</li> <li>• Orbital tumours</li> </ul>		
<p>D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to eye medicine</p>		
<p>E. Explain the facts and principles of the relevant basic and clinically supportive sciences related to eye medicine</p>		



F. Describe the basic ethical and medicolegal principles relevant to the eye medicine.		
G. Describe the basics measurement of quality assurance to ensure good clinical care in his field		
H. Explain the ethical and scientific principles of medical research		
I. Explain the impact of common health problems in the field of speciality on the society.		

### B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case in common problem related to eye medicine	Clinical rounds Senior staff experience	Procedure and case presentation Log book and Portfolios
B. Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to eye medicine		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs.		
G. Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		

H. Create and innovate plans, systems, and other issues for improvement of performance in his practice.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the speciality.		

### C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Take history, examine and clinically diagnose different conditions related to eye medicine.	1-Formal teaching Lectures Seminar 2-service teaching outpatient -inpatient 3-operative 4-direct observation 5-case presentation	Written exam Oral exam Clinical exam Case log book Portfolio Checklist evaluation of life or recorded performance record review
B. Order the following non invasive and invasive diagnostic procedures <ul style="list-style-type: none"> <li>● Corneal topography</li> <li>● Pachometry</li> <li>● Low vision</li> <li>● Visual field</li> </ul>	service teaching -outpatient -inpatient case presentation Observation	

<ul style="list-style-type: none"> <li>● Fluorescein &amp; Rose bengal staining of the cornea and conj</li> <li>● Conj swabs</li> <li>● Placido disc examination keratometry</li> <li>● Smear from the cornea and conj for microbiology study</li> <li>● Shirmer test</li> <li>● Corneal topography</li> <li>● Specular microscopy</li> <li>● Ultrasonic biomicroscopy</li> <li>● Tonometry</li> <li>● Gonioscopy</li> <li>● OCT optic nerve and retina</li> <li>● Electrophysiology examination VEP, ERG</li> <li>● Glare testing</li> <li>● Potential acuity meter</li> <li>● Systemic evaluation for cat extraction</li> <li>● AC tap vit. tap</li> <li>● Blood picture</li> <li>● Lipogram</li> <li>● Blood sugar level</li> <li>● Bone marrow</li> <li>● Thyroid function</li> <li>● Investigation for collagen diseases</li> <li>● Investigation for Sarcoidosis</li> <li>● MRI</li> <li>● CT</li> <li>● Plain x-ray</li> <li>● Measurement of levator function,</li> <li>● Exophthalmometry</li> <li>● Investigation of epiphora probing syringing</li> <li>● Dacryocystography</li> <li>● Thyroid function tests</li> </ul>	& supervision	
---	------------------	--

<ul style="list-style-type: none"> <li>● Fluorescein angiography</li> <li>● Indocyanin green angiography</li> <li>● Amsilar grid</li> <li>● EUA for <ul style="list-style-type: none"> <li>-IOP</li> <li>-Angle exam</li> <li>-Examination of the rtina</li> <li>-Lens exam</li> </ul> </li> <li>● Tran illumination for intraocular tumour.</li> <li>● excision biopsy</li> </ul>		
<p>C. Interpret the following non invasive and invasive diagnostic procedures</p> <ul style="list-style-type: none"> <li>● Corneal topography</li> <li>● Pachometry</li> <li>● Low vision</li> <li>● Visual acuity</li> <li>● Visual field</li> <li>● Fluorescein&amp; Rose pingal staining of the cornea and conj</li> <li>● conj swabs</li> <li>● Placido disc examination keratotomy</li> <li>● Examination by the slit lamp</li> <li>● Smear from the cornea and conj for microbiology study</li> <li>● Shirmer test</li> <li>● Precorneal tear film break up time</li> <li>● Corneal topography</li> <li>● Specular microscopy</li> <li>● Ultrasonic biomicroscopy</li> <li>● Tonometry</li> <li>● Gonioscopy</li> <li>● OCT optic nerved and retina</li> <li>● Electrophysiology examination of the</li> </ul>	<p>service teaching -outpatient -inpatient case presentation Observation &amp; supervision</p>	

<p>optic nerve</p> <ul style="list-style-type: none"> <li>● Glare testing</li> <li>● Potential acuity meter</li> <li>● Systemic evaluation for cat extreaction</li> <li>● AC tap vit. tap</li> <li>● Blood picture</li> <li>● Lipogram</li> <li>● Blood sugar level</li> <li>● Bone marrow</li> <li>● Thyroid function</li> <li>● Investigation for collagen diseases</li> <li>● Investigation for Sarcoidosis</li> <li>● MRI</li> <li>● CT</li> <li>● Plain x-ray</li> <li>● Temporal artery biopsy.</li> <li>● Measurement of levator function,</li> <li>● Exophthalmometry</li> <li>● Investigation of epiphora probing syringing</li> <li>● Dacryocysteography</li> <li>● Thyroid function tests</li> <li>● Fluorescein angiography</li> <li>● Indocyanin green angiography</li> <li>● Fundus drawings of the retina, showing complex vitreoretinal relationships and findings</li> </ul>		
<p>D. Perform the following non invasive and invasive diagnostic procedures</p> <ul style="list-style-type: none"> <li>● Visual acuity</li> <li>● Examination by the slit lamp</li> <li>● Red reflex examination</li> <li>● Streak retinoscope</li> </ul>	<p>service teaching -outpatient -inpatient case presentation Observation</p>	

<ul style="list-style-type: none"> <li>• Autorefractometers</li> <li>• Fluorescein &amp; Rose bengal staining of the cornea and conj</li> <li>• conj swabs</li> <li>• Placido disc examination keratometry</li> <li>• smear from the cornea and conj for microbiology study</li> <li>• shirmer test</li> <li>• precorneal tear film break up time</li> <li>• Corneal topography</li> <li>• Specular microscopy</li> <li>• Ultrasonic biomicroscopy</li> <li>• Tonometry</li> <li>• Gonioscopy</li> <li>• Biometry</li> <li>• AC tap vit. tap</li> <li>• Proptometry</li> <li>• Basic pupillary examination</li> <li>• Basic pharmacologic pupillary testing</li> <li>• Detection of light-near dissociation</li> <li>• Basic ocular motility examination:</li> <li>• Cranial nerve evaluation</li> <li>• Ocular alignment using simple techniques</li> <li>• Basic cover/uncover testing for tropia.</li> <li>• Alternate cover testing for phoria.</li> <li>• Simultaneous prism and cover testing.</li> <li>• Measurement of deviations with prisms.</li> <li>• Fresnel and grind-in prisms.</li> <li>• Fusion and forced generation testing.</li> <li>• Assessment of saccade accuracy and pursuit and optokinetic testing.</li> <li>• Eyelid function measurements</li> </ul>	& supervision	
---	------------------	--

<ul style="list-style-type: none"> <li>● Confrontational field testing.</li> <li>● Goldmann perimetry</li> <li>● Basic automated perimetry</li> <li>● Tangent screen test.</li> <li>● Basic direct, indirect, and magnified ophthalmoscopic examination of the optic disc.</li> <li>● Intravenous edrophonium (Tensilon) and Prostigmin tests for myasthenia gravis.</li> <li>● More advanced interpretation of neuro-radiologic images</li> <li>● temporal artery biopsy.</li> <li>● measurement of levator function,</li> <li>● Exophthalmometry</li> <li>● Investigation of epiphora probing syringing</li> <li>● Fundus drawings of the retina, showing complex vitreoretinal relationships and findings</li> <li>● Different fundus viewing lenses</li> <li>● More advanced measurements of strabismus .</li> <li>● Assessment of vision in more difficult strabismus patients .</li> <li>● Preoperative assessment of strabismus</li> <li>● EUA for <ul style="list-style-type: none"> <li>-IOP</li> <li>-Angle exam</li> <li>-Examination of the rtina</li> <li>-Lens exam</li> </ul> </li> <li>● Tran illumination for intraocular tumour.</li> <li>● excision biopsy</li> </ul>		
<p>E. Prescribe the following non invasive and invasive therapeutic procedures.</p>		

<p><u>Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</u></p> <ul style="list-style-type: none"> <li>• Prescription of glasses or contact lenses for correction of refractive errors</li> </ul> <p><u>Refractive surgery &amp; low vision</u></p> <ul style="list-style-type: none"> <li>• Various low vision aids</li> </ul> <p><u>Cornea ,external diseases and refractive surgery</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Red eye</li> <li>• Corneal ulcers</li> <li>• Inflammatory lesions of the skin of the lid</li> <li>• Infected chlazion, stye</li> <li>• Blepharitis</li> <li>• lid margin margin deformities</li> <li>• Conj. Infections</li> <li>• Degenerative lesions</li> <li>• Xerosis</li> <li>• Tumours</li> <li>• Anterior segment trauma</li> </ul> <p><u>Glaucoma</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Primary congenital glaucoma</li> <li>• Primary angle closure glaucoma</li> <li>• Secondary angle closure glaucoma</li> <li>• Primary open angle glaucoma</li> <li>• Secondary open angle glaucoma</li> </ul> <p><u>Cataract</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Senile cataract</li> <li>• Complicated cataract</li> <li>• Drug induced cataract</li> </ul>		
--	--	--



<ul style="list-style-type: none"> <li>• Cataract in systemic diseases</li> </ul> <p><u>Uveitis</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Acute anterior and posterior uveitis.</li> <li>• chronic uveitis</li> <li>• inflammatory posterior uveitis; masquerade syndromes</li> </ul> <p><u>Eye in systemic diseases</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Ocular changes in diabetes</li> <li>• Ocular changes in Hypertension and atherosclerosis</li> <li>• Ocular changes in Disthyroid disease</li> </ul> <p><u>Neuro-Ophthalmology</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Optic neuropathies</li> <li>• Ocular motor neuropathies</li> <li>• Nystagmus</li> <li>• Pupillary abnormalities</li> <li>• Visual field defects .</li> </ul> <p><u>Oculoplastic Surgery and Orbit</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Common craniosynostoses and other congenital malformations.</li> <li>• Advanced eyelid, orbital, and lacrimal trauma.</li> <li>• Epiphora in children</li> <li>• Canaliculitis, dacryocystitis, acute and chronic dacryoadenitis, preseptal cellulitis, and orbital cellulitis.</li> <li>• Thyroid ophthalmopathy.</li> </ul> <p><u>vitreo retinal diseases</u></p> <p>treatment of the following conditions</p> <ul style="list-style-type: none"> <li>• Retinal detachment primary and</li> </ul>		
--	--	--

<p>secondary</p> <ul style="list-style-type: none"> <li>● macular diseases <ul style="list-style-type: none"> <li>- Age-related macular degeneration (ARMD).</li> <li>- Choroidal neovascularization</li> <li>- High myopia.</li> <li>- Macular holes.</li> <li>- Cystoid macular edema.</li> <li>- Central serous choroidopathy (retinopathy).</li> </ul> </li> <li>● retinal vascular diseases: <ul style="list-style-type: none"> <li>- Arterial and venous obstructions.</li> <li>- Diabetic retinopathy.</li> <li>- Hypertensive retinopathy.</li> <li>- Peripheral retinal vascular occlusive disease.</li> <li>- Acquired retinal vascular diseases.</li> </ul> </li> <li>● Retinal pigment epithelial detachment.</li> <li>● posterior uveitis syndromes and endophthalmitis</li> </ul> <p><u>Pediatric Ophthalmology &amp; Strabismus</u> treatment of the following conditions</p> <ul style="list-style-type: none"> <li>● Amblyopia</li> <li>● Strabismus in children</li> <li>● Childhood cataract</li> <li>● Congenital cataract</li> <li>● Neonate Ophthalmias</li> <li>● Dacryocystitis in children</li> </ul> <p><u>Ocular Oncology</u> treatment</p> <ul style="list-style-type: none"> <li>● Conjunctival tumours.</li> </ul>		
<p>F. Perform the following non invasive and invasive therapeutic procedures <u>Retinoscopy ,refraction, contact lenses,</u></p>		

refractive surgery, and low vision rehabilitation

- Prescription of glasses or contact lenses for correction of refractive errors

Cornea ,external diseases and refractive surgery

treatment of the following conditions

- Red eye
- Corneal ulcers
- Inflammatory lesions of the skin of the lid
- Infected chlazion, stye
- Blepharitis
- lid margin margin deformities
- Conj. Infections
- Degenerative lesions
- Xerosis
- Anterior segment trauma

Glaucoma

treatment of the following conditions

- Primary congenital glaucoma
- Primary angle closure glaucoma
- Secondary angle closure glaucoma
- Primary open angle glaucoma
- Secondary open angle glaucoma

Cataract

treatment of the following conditions

- Senile cataract
- Complicated cataract
- Drug induced cataract
- Cataract in systemic diseases

Uveitis

treatment of the following conditions

- Acute anterior and posterior uveitis.

- chronic uveitis
- inflammatory posterior uveitis; masquerade syndromes

Eye in systemic diseases

treatment of the following conditions

- Ocular changes in diabetes
- Ocular changes in Hypertension and atherosclerosis
- Ocular changes in Disthyroid disease

Neuro-Ophthalmology

Medical, laser and/or surgical treatment of the following conditions

- Optic neuropathies
- Ocular motor neuropathies
- Nystagmus
- Pupillary abnormalities
- Visual field defects.
- Myasthenia gravis

Oculoplastic Surgery and Orbit

treatment of the following conditions

- Epiphora in children
- Canaliculitis, dacryocystitis, acute and chronic dacryoadenitis, preseptal cellulitis, and orbital cellulitis.
- Thyroid ophthalmopathy.

vitreo retinal diseases

treatment of the following conditions

- macular diseases
  - Age-related macular degeneration (ARMD).
  - Choroidal neovascularization
  - High myopia.
  - Cystoid macular edema.
  - Central serous choroidopathy (retinopathy).

<ul style="list-style-type: none"> <li>● retinal vascular diseases: <ul style="list-style-type: none"> <li>- Arterial and venous obstructions.</li> <li>- Diabetic retinopathy.</li> <li>- Hypertensive retinopathy.</li> <li>- Peripheral retinal vascular occlusive disease.</li> <li>- Acquired retinal vascular diseases.</li> </ul> </li> <li>● Retinal pigment epithelial detachment.</li> <li>● posterior uveitis syndromes and endophthalmitis</li> </ul> <p><u>Pediatric Ophthalmology &amp; Strabismus</u> treatment of the following conditions</p> <ul style="list-style-type: none"> <li>● Childhood cataract</li> <li>● Congenital cataract</li> <li>● Neonate Opthamias</li> <li>● Dacryocystitis in children</li> </ul>		
<p>G. Develop and carry out patient management plans for the following problems</p> <ul style="list-style-type: none"> <li>● High errors of refraction</li> <li>● amblyopia</li> <li>● Contact lens uses</li> <li>● Refractive Surgery</li> <li>● Low vision rehabilitation</li> <li>● Microbial conj</li> <li>● Chemical trauma</li> <li>● Phototoxicity</li> <li>● Keratoplasty</li> <li>● congenital glaucoma</li> <li>● ACG</li> <li>● OAG</li> <li>● Ocular hypertension</li> <li>● Low tension glaucoma</li> <li>● secondary glaucomas</li> <li>● traumatic glaucomas</li> </ul>		

<ul style="list-style-type: none"> <li>● Cat in children</li> <li>● Complicated cataracts</li> <li>● Cat with systemic diseases</li> <li>● Management of postoperative complications of cat ext.</li> <li>● recurrent uveitis</li> <li>● Complications of uveitis</li> <li>● Uveitis in children</li> <li>● ocular lesions in: <ul style="list-style-type: none"> <li>-Diabetic</li> <li>-Hypertensive</li> <li>-Dysthyroid</li> <li>-Blood diseases</li> </ul> </li> <li>● Demyelinating diseases</li> <li>● Optic disc disorders</li> <li>● Paralytic squint</li> <li>● Diabetic retinopathy</li> <li>● Tramatic vitreoretinopathies</li> <li>● Retinitis of prematurity</li> <li>● Strabismus</li> <li>● ROP</li> <li>● Amblyopia</li> <li>● Congenital cataract</li> <li>● Congenital glaucoma</li> <li>● Epiphora in children</li> <li>● Melanotic lesions of the skin and conj.</li> <li>● Retinoblastoma</li> <li>● Malignant melanoma of the choroids</li> <li>● Malignancy of adenexal tissues</li> </ul>		
--	--	--

<p>H. Counsel and educate patients and their family about Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</p> <ul style="list-style-type: none"> <li>● Errors of refraction</li> <li>● amblyopia</li> <li>● Contact lens uses</li> <li>● Refractive Surgery</li> <li>● Low vision rehabilitation</li> </ul> <p>Cornea</p> <ul style="list-style-type: none"> <li>● Microbial conj</li> <li>● Chemical trauma</li> <li>● Phototoxicity</li> <li>● Keratoplasty</li> </ul> <p>GLAUCOMA</p> <ul style="list-style-type: none"> <li>● congenital glaucoma</li> <li>● ACG</li> <li>● OAG</li> <li>● Ocular hypertension</li> <li>● Low tension glaucoma</li> <li>● secondary glaucomas</li> <li>● traumatic glaucomas</li> </ul> <p>Cataract</p> <ul style="list-style-type: none"> <li>● Cat in children and the expected complications</li> <li>● Cat with systemic diseases</li> <li>● Possible complications of cat surgery</li> <li>● Cat in relation to different types of trauma</li> </ul> <p>Uveites</p> <ul style="list-style-type: none"> <li>● recurrent uveitis</li> <li>● Complications of uveitis</li> <li>● Uveitis in children</li> </ul> <p>Eye in systemic diseases</p>		
--	--	--

<ul style="list-style-type: none"> <li>• Diabetic</li> <li>• Hypertensive</li> <li>• Dysthyroid</li> <li>• Blood diseases</li> </ul> <p>Neuro-Ophthalmology</p> <ul style="list-style-type: none"> <li>• Demyelinating diseases</li> <li>• Optic disc disorders</li> <li>• Paralytic squint</li> </ul> <p>Oculoplastic Surgery and Orbit</p> <ul style="list-style-type: none"> <li>• Orbital trauma</li> <li>• Epiphora and Epiphora in children</li> <li>• Major deformities of the face(traumatic and congenital)</li> <li>• Major ocular deformities(traumatic and congenital)</li> <li>• Dythyroid orbitopathy</li> </ul> <p>vitreo retinal diseases</p> <ul style="list-style-type: none"> <li>• Diabetic retinopathy</li> <li>• Tramatic vitreoretinopathies</li> <li>• Retinitis of prematurity</li> <li>• AMD</li> </ul> <p>Pediatic ophthalmology &amp; Strabismus</p> <ul style="list-style-type: none"> <li>• Strabismus</li> <li>• ROP</li> <li>• Amblyopia</li> <li>• Congenital cataract</li> <li>• Congenital glaucoma</li> <li>• Congenital epiphora</li> </ul> <p>Ocular Oncology</p> <ul style="list-style-type: none"> <li>• various treatment options in a detailed, ethical, and compassionate manner</li> <li>• different types of malignancy in different ages</li> </ul>		
<p>I. Use information technology to support patient care decisions and patient</p>		



<p>education for the eye medicine related conditions.</p>		
<p>J. Provide health care services aimed at preventing the following conditions</p> <ul style="list-style-type: none"> <li>• Amblyopia</li> <li>• Complications of contact lens</li> <li>• Microbial conj</li> <li>• Chemical trauma</li> <li>• Physical injuries</li> <li>• secondary angle closure glaucoma</li> <li>• secondary open angle glaucoma</li> <li>• traumatic glaucoma</li> <li>• tramatic cat</li> <li>• recurrent uveitis</li> <li>• Complications of uveitis</li> <li>• Toxic neuritis</li> <li>• Nutritional neuropathies</li> <li>• Orbital trauma</li> <li>• Ocular trauma</li> <li>• Diabetic retinopathy</li> <li>• Traumatic vitreoretinopathies-</li> <li>• Retinitis of prematurity</li> <li>• Amblyopia</li> </ul>		
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care .</p>		
<p>M. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets ( Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

## D-General Skills

### Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (Plan and conduct audit cycles)	Formal teaching Lecture seminar Observation Supervision tutorial	Oral exam Written exam Examination of records Portfolios Log book Direct supervision
B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.		
C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D. Use information technology to manage information, access on-line medical information; and support their own education		
E. Lead the learning of students and other health care professionals.		

## Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
F. Create and sustain a therapeutic and ethically sound relationship with patients	Lectures Seminars tutorial Observation Supervision service teaching outpatient inpatient	Oral exam Log book 10 cases Written exam record review Examination of records portfolios
G. Perform the following oral communications:		
H. Fill the following reports: <u>Low vision rehabilitation</u> <ul style="list-style-type: none"> <li>• refractive surgery</li> <li>• Legal blindness</li> <li>• Cornea ,external diseases and refractive surger</li> </ul> <u>Cornea ,external diseases and refractive surgery</u> <ul style="list-style-type: none"> <li>• Ocular emergencies</li> <li>• Referral to other centers</li> </ul> <u>Glaucoma</u> <ul style="list-style-type: none"> <li>• Referral for glaucoma investigation</li> <li>• Referral for specialized centers</li> </ul> <u>Cataract</u> <ul style="list-style-type: none"> <li>• Referral of cataract cases in different situations</li> <li>• Consent for cataract surgery</li> <li>• Admission and discharge sheets</li> </ul> <u>Uveitis</u>		

<ul style="list-style-type: none"> <li>• Referral for pathological studies</li> </ul> <p><u>Eye in systemic diseases</u></p> <ul style="list-style-type: none"> <li>• Referral to different specialities</li> <li>• Consent in cases eye problems necessitating surgical or invasive therapy</li> </ul> <p><u>Neuro-Ophthalmology</u></p> <ul style="list-style-type: none"> <li>• Referral reports for investigation centers</li> <li>• Referral reports for higher centers</li> </ul> <p><u>Oculoplastic Surgery and Orbit</u></p> <ul style="list-style-type: none"> <li>• Referral for general surgery</li> <li>• Referral for medico legal aspects</li> <li>• Reference for plastic surgery</li> </ul> <p><u>vitreo retinal diseases</u></p> <ul style="list-style-type: none"> <li>• Parents and families of premature babies with ROP</li> </ul> <p><u>Pediatric ophthalmology &amp; Strabismus</u></p> <ul style="list-style-type: none"> <li>• Referral to higher centers</li> <li>• Referral to other specialties</li> <li>• Ocular investigative centers</li> </ul> <p><u>Ocular Oncology</u></p> <ul style="list-style-type: none"> <li>• Referral to higher centers for <ul style="list-style-type: none"> <li>- radiotherapy</li> <li>- Chemotherapy</li> <li>- Cosmetic reconstruction after surgery</li> <li>- rehabilitation</li> </ul> </li> </ul>		
<p>I. Work effectively with others as a member or leader of a health care team e.g. in labor ward</p>		

## Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	Observation Senior staff experience Case taking	1. Objective structured clinical examination 2. Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

## Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems good administrative and time management.	-Observation -Senior staff experience	1. 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance

O. Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

## Unit 2 (Module) Eye Surgery

### A-Knowledge and understanding

ILOs	Methods of teaching/ learning	<i>Methods of Evaluation</i>
<p>A. Explain update and evidence- based etiology, clinical picture, diagnosis and management of the following common diseases and clinical conditions:</p> <p><u>Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation</u></p> <ul style="list-style-type: none"> <li>- Microbial keratitis with contact lens weares-</li> <li>- keratitis with laser surgery</li> <li>- Errors of refraction</li> <li>- Amblyopia</li> <li>- Blindness and low vision</li> </ul> <p><u>Cornea ,external diseases and refractive surgery</u></p> <ul style="list-style-type: none"> <li>- Lid inflammations</li> <li>- Lid tumours</li> <li>- Conj infections</li> <li>- Conj inflammations</li> </ul>	<p>Formal teaching Didactic Lectures tutorial Seminars Journal club Educational prescription Persent a case (true or simulated ) in a grand round</p>	<p>Written exam Oral exam Objective structured clinical examination Oral exam</p>

- Conj degeneration
- Corneal ulcerative and non ulcerative lesions
- Different types of Keratitis

### GLAUCOMA

- Congenital glaucoma
- ACG
- OAG
- Ocular hypertension
- Low tension glaucoma
- secondary glaucomas
  - lens induced glaucoma
  - neovascular
  - uveitic
  - hemorrhagic
  - silicon filled eyes
- traumatic glaucomas

### Cataract

- Different types of cat.
- Post operative complications of cat. surgery

### Uveitis

- anterior uveitis
- Posterior uveitis
- Uveitis in children

### Eye in systemic diseases

- Ocular complications of diabetes
- Ocular complications of blood disorders
- Ocular complications in endocrinal disorders

### Neuro-Ophthalmology

- Visual pathway abnormalities
- Myasthenia gravis
- Optic neuropathies

### Oculoplastic Surgery and Orbit

- Orbital inflammations
- Lacrimal gland disorders
- lacrimal drainage system canaliculi ,sac , duct

<p><u>vitreo retinal diseases</u></p> <ul style="list-style-type: none"> <li>- Retinal detachment</li> <li>- Retinopathies</li> <li>- Maculopathies</li> <li>- Intraocular infections</li> <li>- Retinitis of prematurity</li> <li>- Cryo burn</li> <li>- Diathermy burn</li> <li>- Intraocular infections</li> <li>- ROP</li> </ul> <p><u>Pediatric ophthalmology &amp; Strabismus</u></p> <ul style="list-style-type: none"> <li>- ROP</li> <li>- Retinoblastoma</li> <li>- Neonate Ophthalmias</li> <li>- Dacryocystitis in children</li> <li>- Amblyopia</li> <li>- Strabismus in children</li> <li>- Childhood cataract</li> <li>- Congenital cataract</li> <li>- Congenital ocular deformities</li> </ul> <p><u>Oncology</u></p> <ul style="list-style-type: none"> <li>- Retinoblastoma</li> <li>- Benign and malignant melanomas</li> <li>● IO infection</li> </ul>		
<p>B. Mention the principles of</p> <ul style="list-style-type: none"> <li>● Fluorescein angiography</li> <li>● Indocyanine green angiography</li> <li>● Optical coherence tomography</li> <li>● Pentacam</li> <li>● Corneal topography</li> <li>● Pachometry</li> <li>● Perimetry</li> <li>● Electrophysiological tests</li> <li>● Red reflex examination</li> <li>● Streak retinoscope use</li> </ul>		



<ul style="list-style-type: none"> <li>• Ophthalmic ultrasonography</li> <li>• Keratometer</li> <li>• Contact lens fitting</li> </ul>		
<p>C. Mention basic of the following rare diseases and conditions</p> <p><u>Cornea ,external diseases and refractive surgery</u></p> <ul style="list-style-type: none"> <li>• Lid tumours</li> </ul> <p><u>GLAUCOMA</u></p> <ul style="list-style-type: none"> <li>•Secondary congenital glaucoma</li> <li>•Ocular hypertension</li> <li>•Low tension glaucoma</li> <li>•traumatic glaucomas</li> </ul> <p><u>Uveitis</u></p> <ul style="list-style-type: none"> <li>•Uveitis in children</li> </ul> <p><u>Eye in systemic diseases</u></p> <ul style="list-style-type: none"> <li>•Septicemias</li> <li>•Septic retinitis</li> <li>•Ocular complications of blood disorders</li> </ul> <p><u>Neuro-Ophthalmology</u></p> <ul style="list-style-type: none"> <li>• Myasthenia gravis</li> </ul> <p><u>Oculoplastic Surgery and Orbit</u></p> <ul style="list-style-type: none"> <li>• Orbital inflammations</li> <li>• Lacrimal gland disorders</li> <li>• Lacrimal adenitis</li> <li>• Canaliculitis</li> <li>• Adenexal trauma</li> <li>• Orbital fractures</li> </ul> <p><u>vitreo retinal diseases</u></p> <ul style="list-style-type: none"> <li>• Retinopathies</li> <li>• Retinitis of prematurity</li> </ul> <p><u>Pediatric ophthalmology &amp; Strabismus</u></p> <ul style="list-style-type: none"> <li>- ROP</li> <li>- Retinoblastoma</li> <li>- Childhood cataract</li> </ul>		

- Congenital ocular deformities <u>Oncology</u> - Malignant melanomas		
D. Explain the facts and principles of the relevant basic and clinically supportive sciences related to eye surgery		
E. Explain the facts and principles of the relevant basic and clinically supportive sciences related to eye surgery		
F. Describe the basic ethical and medicolegal principles relevant to the eye surgery.		
G. Describe the basics measurement of quality assurance to ensure good clinical care in his field		
H. Explain the ethical and scientific principles of medical research		
I. Explain the impact of common health problems in the field of speciality on the society.		

### B-Intellectual outcomes

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Design and present case in common problem related to eye surgery	Clinical rounds  Senior staff experience	Procedure and case presentation Log book and Portfolios
B. Apply the basic and clinically supportive sciences which are appropriate to the speciality related conditions / problem / topics.		
C. Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to eye surgery		
D. Plan research projects.		
E. Write scientific papers.		
F. Lead risk management activities as a part of clinical governs.		
G. Plan quality improvement activities in the field of medical education and clinical practice in his speciality.		
H. Create and innovate plans, systems, and other issues for improvement of performance in his practice.		
I. Present and defend his / her data in front of a panel of experts		
J. Formulate management plans and alternative decisions in different situations in the field of the specialty.		

### C-Practical skills (Patient Care)

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>A. Take history, examine and clinically diagnose different conditions related to eye surgery.</p>	<p>1-Formal teaching Lectures Seminar 2-service teaching outpatient -inpatient 3-operative 4-direct observation 5-case presentation</p>	<p>Written exam Oral exam Clinical exam Case log book Portfolio? Checklist evaluation of life or recorded performance record review Objective structured clinical examination</p>
<p>B. Order the following non invasive/invasive therapeutic procedures</p> <ul style="list-style-type: none"> <li>● grafting perforated corneal ulcers</li> <li>● therapeutic keratoplasty</li> <li>● plastic surgery for madarosis</li> <li>● lid reconstruction trauma coloboma afer removal of lid tumours</li> <li>● Correction of recurrent ptosis</li> <li>● Correction of recurrent pterygium</li> <li>● Correction of dificcult types of ptosis</li> <li>● Repair of ocular trauma with tissue loss</li> <li>● Valve implant for glaucoma</li> <li>● Advanced laser surgery for glaucoma</li> <li>● laser photocoagulation</li> <li>● simple vitrectomy</li> <li>● transscleral cryo and diaermy cautery</li> <li>● valvular surgery for glaucoma</li> </ul>	<p>service teaching outpatient -inpatient Operative</p>	

<ul style="list-style-type: none"> <li>● advanced laser photocoagulation</li> <li>● orbital decompression</li> <li>● Advanced vitrectomy</li> <li>● Advanced retinal surgery</li> <li>● Excision of moderate sized and large benign eyelid lesions).</li> <li>● excision of moderate sized and large benign skin lesions</li> <li>● incision and drainage of recurrent or larger chalazia,</li> <li>● incision and drainage of multiple chalazion</li> <li>● retrobulbar hemorrhage,</li> <li>● basic lacrimal procedures below <ul style="list-style-type: none"> <li>- Lacrimal drainage testing (irrigation, dye disappearance test).</li> <li>- Lacrimal intubation.</li> </ul> </li> <li>● Dacryocystorhinostomy (external).</li> <li>● correction of entropion</li> <li>● electrocautery of the lashes</li> <li>● correction of ectropion</li> <li>● correction of ptosis</li> <li>● tarsorrhaphy</li> <li>● dacryocystectomy</li> <li>● Reconstruction of severe chemical injuries of the face</li> <li>● correction of madarosis</li> <li>● Open DCR</li> <li>● management of intraorbital foreign – body</li> <li>● management of Fractures of the orbital walls</li> <li>● management of Dysthyroid orbitopathy</li> <li>● advanced laser activities</li> <li>● advanced vitrectomies</li> <li>● management of retinal membranes</li> </ul>		
---	--	--

<ul style="list-style-type: none"> <li>• photodynamic therapy</li> <li>• surgery of complicated cases of retinal detachment</li> <li>• primary and rhegmatogenous RD</li> <li>• laser activity for retinopathies PRP focal</li> <li>• simpler vitrectomy</li> <li>• intra vitreal injections</li> <li>• a thermal buckle</li> <li>• cyclocryotherapy</li> <li>• cyclodiathermy</li> <li>• boltulinum injection</li> <li>• Recurrent squint</li> <li>• Advanced vitrectomies</li> <li>• Endolaser</li> <li>• Destruction or excision of conjunctival, corneal, and intraocular tumours.</li> <li>• Laser photocoagulation for intraocular tumours.</li> <li>• transpupillary thermal therapy for intraocular tumors</li> <li>• Radiation therapy for ocular tumors (e.g., radioactive plaque localization, external beam radiation, radiation retinopathy).</li> <li>• chemotherapy</li> </ul>		
<p>C. Interpret the following non invasive and invasive diagnostic procedures</p> <ul style="list-style-type: none"> <li>• Excisional biopsy of lid, conjunctival &amp; corneal masses.</li> <li>• AC &amp; vitreous tap.</li> <li>• Core vitrectomy for endophthalmitis.</li> </ul> <p>Seidle test for leaking bleb after glaucoma surgeries.</p> <ul style="list-style-type: none"> <li>• Investigations for post refractive surgery ectasia</li> </ul>	<p>service teaching outpatient -inpatient Operative</p>	

<p>D. Perform the following non invasive and invasive diagnostic procedures</p> <ul style="list-style-type: none"> <li>● Excisional biopsy of lid, conjunctival &amp; corneal masses.</li> <li>● AC &amp; vitreous tap.</li> <li>● Core vitrectomy for endophthalmitis.</li> <li>● Seidle test for leaking bleb after glaucoma surgeries.</li> </ul>	<p>service teaching outpatient -inpatient Operative</p>	
<p>E. Prescribe the following non invasive/invasive therapeutic procedures.</p> <ul style="list-style-type: none"> <li>● grafting perforated corneal ulcers</li> <li>● Correction of recurrent pterygium</li> <li>● Repair of ocular trauma</li> <li>● laser surgery for glaucoma</li> <li>● laser photocoagulation</li> <li>● trans scleral cryo and diaermy cautery</li> <li>● advanced laser photocoagulation</li> <li>● Excision of moderate sized and large benign eyelid lesions).</li> <li>● excision of moderate sized and large benign skin lesions</li> <li>● incision and drainage of recurrent or larger chalazia,</li> <li>● incision and drainage of multiple chalazion</li> <li>● Retrobulbar hemorrhage,</li> <li>● basic lacrimal procedures below <ul style="list-style-type: none"> <li>- Lacrimal drainage testing (irrigation, dye disappearance test).</li> <li>- Lacrimal intubation.</li> </ul> </li> <li>● Dacryocystorhinostomy (external).</li> <li>● correction of entropion</li> <li>● electrocautery of the lashes</li> <li>● correction of ectropion</li> <li>● correction of ptosis</li> </ul>	<p>service teaching outpatient -inpatient Operative</p>	

<ul style="list-style-type: none"> <li>• tarsorrhaphy</li> <li>• dacryocystectomy</li> <li>• Open DCR</li> <li>• management of Dysthyroid orbitopathy</li> <li>• advanced laser activities</li> <li>• laser activity for retinopathies PRP focal</li> <li>• simpler vitrectomy</li> <li>• intra vitreal injections</li> <li>• a thermal buckle</li> <li>• cyclocryotherapy</li> <li>• cyclodiathermy</li> <li>• Endolaser</li> <li>• Destruction or excision of conjunctival, corneal, tumours.</li> </ul>		
<p>F. Perform the following non invasive/ and invasive therapeutic procedures</p> <ul style="list-style-type: none"> <li>• Contact lenses for difficult cases <ul style="list-style-type: none"> <li>- Keratoconus</li> <li>- post keratoplasty</li> <li>- Difficult fitting</li> </ul> </li> <li>• corneal topography to fit contact lenses</li> <li>• Refractive surgery <ul style="list-style-type: none"> <li>- PRK LASIK LASEK ...</li> <li>- Treatment of amblyopia</li> </ul> </li> <li>• myopic, hypermetropic &amp; atigmatc correction</li> <li>• contact lenses for strait forward cases</li> <li>• appropriate CL selection</li> <li>• Low vision devices and educate low vision patients on the uses and limitations of these devices.</li> <li>• injection of local anaethsia for the lid and conj surgery</li> <li>• removal of corneal &amp;conj FB</li> </ul>		



<ul style="list-style-type: none"> <li>• conj graft or flap or amniotic membrane for corneal ulcers</li> <li>• application of corneal glue</li> <li>• stromal micropuncture</li> <li>• removal of Pterygium</li> <li>• subconj injection antibiotic steroid mdricaine</li> <li>• electrocautery of the lashes</li> <li>• correction of ectropion snellens</li> <li>• correction of recurrent entropion</li> <li>• correction of ectroipion</li> <li>• correction of symblepharon</li> <li>• tarsorrhaphy</li> <li>• curette evacuation of chlazion</li> <li>• evacuation of stye</li> <li>• correction of ptosis</li> <li>• Simple repair of ocular trauma</li> <li>• Lid conj corneal corneoscleral</li> <li>• Superficial lamellar keratectomy</li> <li>• laser iridectomy</li> <li>• YAG laser iridectomy</li> <li>• Trabeculectomy</li> <li>• Repeated trabeculectomy</li> <li>• Details of local anaesthesia</li> <li>• Use the operating microscope for basic cataract surgery <ul style="list-style-type: none"> <li>- ECCE</li> <li>- ICCE</li> </ul> </li> <li>• IOL implantation</li> <li>• Secondary IOL implantation</li> <li>• YAG laser use</li> <li>• Management of postoperative complications of cat ext.</li> <li>• Management of opacified posterior cap</li> </ul>		
--	--	--

<ul style="list-style-type: none"> <li>● Prescribe and perform <ul style="list-style-type: none"> <li>- phacoemulsification</li> <li>- Lensectomy</li> <li>- Cat in silicon filled eyes</li> </ul> </li> <li>● Management of posteriorly dislocated lens fragments</li> <li>● Management of Posteriorly dislocated IOL</li> <li>● Steroids in the treatment of uveitis by various routes.</li> <li>● complications of uveitis therapy (e.g., cataract, glaucoma)</li> <li>● immunosuppressive agents in uveitis</li> <li>● Biopsy, when indicated, the vitreous or uveal tract.</li> <li>● Insert intravitreal implants containing antiviral or corticosteroid medications. Vitrectomy or scleral buckling procedures.</li> <li>● laser photocoagulation</li> <li>● simple vitrectomy</li> <li>● transscleral cryo and diathermy cautery</li> <li>● valvular surgery for glaucoma</li> <li>● lid suture</li> <li>● tarsorrhaphy</li> <li>● prescribe treatment of myethenia</li> <li>● repair of Carotid-cavernous fistula</li> <li>● optic nerve decompression</li> <li>● sheath fenestration</li> <li>● correction of paralytic squint</li> <li>● correction of simple cases of paralytic squint</li> <li>● treatment of simple cases of optic nerve disorders</li> <li>● severe chemical injuries of the face</li> <li>● correction of madarosis</li> </ul>		
--	--	--

<ul style="list-style-type: none"> <li>• perform open DCR</li> <li>• management of intraorbital foreign – body</li> <li>• management of Fractures of the orbital walls</li> <li>• management of Dysthyroid orbitopathy</li> <li>• laser activity for retinopathies PRP focal</li> <li>• simpler vitrectomy</li> <li>• intra vitreal injections</li> <li>• a thermal buckle</li> <li>• cyclocryotherapy</li> <li>• cyclodiathermy</li> <li>• Perform basic extraocular muscle surgery:</li> <li>• Perform the following strabismus surgeries: <ul style="list-style-type: none"> <li>• Recession.</li> <li>• Resection.</li> <li>• Transposition.</li> <li>• Use of adjustable sutures.</li> </ul> </li> <li>• Manage the complications of strabismus surgery.</li> <li>• Posterior recti fixation for nystagmus</li> <li>• Syringing and probing of children with epiphora</li> <li>• botulinum injection</li> <li>• Recurrent squint</li> <li>• Advanced vitrectomies</li> <li>• Endolaser</li> <li>• excision of lid, conjunctival, and corneal tumours</li> <li>• Perform an enucleation</li> <li>• medical treatment for POAG</li> <li>• medical treatment for PACG</li> <li>• medical treatment for secondary glaucomas</li> </ul>		
---	--	--

G. Develop and carry out patient management plans for the following problems

- High errors of refraction
- media opacities
- Irregular astigmatism
- Post operative refraction
- Low vision
- Lid reconstruction
- Chemical injuries of the eye
- Conj & cornea xerosis
- congenital glaucoma
- ACG
- OAG
- Ocular hypertension
- Low tension glaucoma
- secondary glaucomas
  - lens induced glaucoma
  - neovascular
  - uveitic
  - hemorrhagic
  - silicon filled eyes
  - traumatic glaucomas
- Cat in children
- Complicated cataracts
- Cat with systemic diseases
- Management of postoperative complications of cataract extraction.
- Diabetic
- Hypertensive
- Dysthyroid
- Blood diseases
- Demyelinating diseases
- Optic disc disorders
- Paralytic squint

<ul style="list-style-type: none"> <li>● Orbital trauma</li> <li>● Epiphora</li> <li>● Major deformities of the face(traumatic and congenital)</li> <li>● Major ocular deformities(traumatic and congenital)</li> <li>● Dythyroid orbitopathy</li> <li>● Diabetic retinopathy</li> <li>● Traumatic vitreoretinopathies</li> <li>● Retinitis of prematurely</li> <li>● Strabismus</li> <li>● ROP</li> <li>● Amblyopia</li> <li>● Congenital cataract</li> <li>● Congenital glaucoma</li> <li>● Epiphora in children</li> <li>● Melanotic lesions of the skin and conj.</li> <li>● Retinoblastoma</li> <li>● Malignant melanoma of the choroids</li> <li>● Malignancy of adenexal tissues</li> </ul>		
<p>H. Counsel and educate patients and their family about</p> <ul style="list-style-type: none"> <li>● Errors of refraction</li> <li>● amblyopia</li> <li>● Contact lens uses</li> <li>● Refractive Surgery</li> <li>● Low vision rehabilitation</li> <li>● Microbial conj</li> <li>● Chemical trauma</li> <li>● Phototoxicity</li> <li>● Keratoplasty</li> <li>● congenital glaucoma</li> <li>● ACG</li> <li>● OAG</li> </ul>		

<ul style="list-style-type: none"> <li>● Ocular hypertension</li> <li>● Low tension glaucoma</li> <li>● secondary glaucomas</li> <li>● traumatic glaucomas</li> <li>● Cat in children and the expected complications</li> <li>● Cat with systemic diseases</li> <li>● Possible complications of cat surgery</li> <li>● Cat in relation to different types of trauma</li> <li>● recurrent uveitis</li> <li>● Complications of uveitis</li> <li>● Uveitis in children</li> <li>● Diabetic</li> <li>● Hypertensive</li> <li>● Dysthyroid</li> <li>● Blood diseases</li> <li>● Demyelinating diseases</li> <li>● Optic disc disorders</li> <li>● Paralytic squint</li> <li>● Orbital trauma</li> <li>● Epiphora and Epiphora in children</li> <li>● Major deformities of the face(traumatic and congenital)</li> <li>● Major ocular deformities(traumatic and congenital)</li> <li>● Dythyroid orbitopathy</li> <li>● Diabetic retinopathy</li> <li>● Tramatic vitreoretinopathies</li> <li>● Retinitis of prematurity</li> <li>● AMD</li> <li>● various treatment options in a detailed, ethical, and compassionate manner</li> <li>● different types of malignancy in different ages</li> </ul>		
---	--	--

<p>I. Use information technology to support patient care decisions and patient education for the eye surgery related conditions.</p>		
<p>J. Provide health care services aimed at preventing the following conditions</p> <ul style="list-style-type: none"> <li>● Amblyopia</li> <li>● Complications of high errors of refraction</li> <li>● Microbial conj</li> <li>● Chemical trauma</li> <li>● Physical injuries</li> <li>● traumatic glaucomas</li> <li>● traumatic cat</li> <li>● Complications of uveitis</li> <li>● Toxic neuritis</li> <li>● Nutritional neuropathies</li> <li>● Orbital trauma</li> <li>● Ocular trauma</li> <li>● mechanical chemical occupational</li> <li>● Complications of lid deformities</li> <li>● Diabetic retinopathy</li> <li>● Intraocular infection</li> <li>● Infectious diseases keratitis,conjunctivitis,adenexal infection</li> </ul>		
<p>K. Work with health care professionals, including those from other disciplines, to provide patient-focused care .</p>		
<p>M. Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets (Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive, timely and legible medical records)</p>		

## D-General Skills

### Practice-Based Learning and Improvement

ILOs	Methods of teaching/ learning	Methods of Evaluation
A. Perform practice-based improvement activities using a systematic methodology in the common problems (Plan and conduct audit cycles)	Formal teaching Lecture seminar Observation Supervision	Oral exam Examination of records Portfolios Log book 15 case Oral exam Written exam Direct supervision Oral
B. Locate, appraises, and assimilates evidence from scientific studies related to patients' health problems.		
C. Apply knowledge of study designs and statistical methods to the appraisal of clinical studies and other information on diagnostic and therapeutic effectiveness		
D. Use information technology to manage information, access on-line medical information; and support their own education		
E. Lead the learning of students and other health care professionals.		



## Interpersonal and Communication Skills

ILOs	Methods of teaching/ learning	Methods of Evaluation
<p>F. Create and sustain a therapeutic and ethically sound relationship with patients</p>	<p>Lectures Seminars tutorial Observation Supervision service teaching outpatient inpatient</p>	<p>Oral exam Log book 10 cases Written exam record review Examination of records portfolios</p>
<p>G. Perform the following oral communications:</p> <p><u>Low vision rehabilitation</u></p> <p>Telling patients and families about blindness</p> <ul style="list-style-type: none"> <li>• Telling patients and families about blindness</li> <li>• Telling about refractive surgery</li> </ul> <p><u>Cornea ,external diseases and refractive surgery</u></p> <ul style="list-style-type: none"> <li>• Counseling of patients with the above diseases</li> </ul> <p><u>Glaucoma</u></p> <ul style="list-style-type: none"> <li>• Patients with advanced glaucoma</li> <li>• Patients scheduled for glaucoma surgery</li> </ul> <p><u>Cataract</u></p> <ul style="list-style-type: none"> <li>• Patients for cataract surgery</li> <li>• Families of patients with pediatric cataract</li> <li>• Occupations where cataract is an</li> </ul>		

<p>occupational hazard</p> <ul style="list-style-type: none"> <li>• Cataract in trauma cases</li> <li>• Patients with diseases where cataract is a complication</li> </ul> <p><u>Uveitis</u></p> <ul style="list-style-type: none"> <li>• Patients and their families with uveitis syndromes</li> <li>• Blinding types of uveitis</li> </ul> <p><u>Eye in systemic diseases</u></p> <ul style="list-style-type: none"> <li>• Patients with diseases affecting the eye</li> <li>• Sight threatening conditions</li> </ul> <p><u>Neuro-Ophthalmology</u></p> <ul style="list-style-type: none"> <li>• Patients with ocular neurological disorders</li> </ul> <p><u>Oculoplastic Surgery and Orbit</u></p> <ul style="list-style-type: none"> <li>• Patients with ocular deformities</li> <li>• Patients with dysthyroid eye disease</li> <li>• Patients and parents of cases with ocular deformities</li> </ul> <p><u>vitreo retinal diseases</u></p> <ul style="list-style-type: none"> <li>• Parents and families of premature babies with ROP</li> </ul> <p><u>Pediatric ophthalmology &amp; Strabismus</u></p> <ul style="list-style-type: none"> <li>• Families of children with <ul style="list-style-type: none"> <li>- low vision</li> <li>- epiphora</li> <li>- strabismus</li> <li>- glaucoma</li> <li>- blindness</li> </ul> </li> </ul> <p><u>Ocular Oncology</u></p> <ul style="list-style-type: none"> <li>• The patients and their families in cases of ocular and adenexal tumors</li> </ul>		
<p>H. Fill the following reports:</p> <p><u>Low vision rehabilitation</u></p> <ul style="list-style-type: none"> <li>• refractive surgery</li> </ul>		

<ul style="list-style-type: none"> <li>• Legal blindness</li> <li>• Cornea ,external diseases and refractive surgery</li> </ul> <p><u>Cornea ,external diseases and refractive surgery</u></p> <ul style="list-style-type: none"> <li>• Ocular emergencies</li> <li>• Referral to other centers</li> </ul> <p><u>Glaucoma</u></p> <ul style="list-style-type: none"> <li>• Referral for glaucoma investigation</li> <li>• Referral for specialized centers</li> </ul> <p><u>Cataract</u></p> <ul style="list-style-type: none"> <li>• Referral of cataract cases in different situations</li> <li>• Consent for cataract surgery</li> <li>• Admission and discharge sheets</li> </ul> <p><u>Uveitis</u></p> <ul style="list-style-type: none"> <li>• Referral for pathological studies</li> </ul> <p><u>Eye in systemic diseases</u></p> <ul style="list-style-type: none"> <li>• Referral to different specialities</li> <li>• Consent in cases eye problems necessitating surgical or invasive therapy</li> </ul> <p><u>Neuro-Ophthalmology</u></p> <ul style="list-style-type: none"> <li>• Referral reports for investigation centers</li> <li>• Referral reports for higher centers</li> </ul> <p><u>Oculoplastic Surgery and Orbit</u></p> <ul style="list-style-type: none"> <li>• Referral for general surgery</li> <li>• Referral for medico legal aspects</li> <li>• Reference for plastic surgery</li> </ul> <p><u>vitreo retinal diseases</u></p> <ul style="list-style-type: none"> <li>• Parents and families of premature babies with ROP</li> </ul> <p><u>Pediatric ophthalmology &amp; Strabismus</u></p>		
--	--	--

<ul style="list-style-type: none"> <li>• Referral to higher centers</li> <li>• Referral to other specialties</li> <li>• Ocular investigative centers</li> </ul> <p><u>Ocular Oncology</u></p> <ul style="list-style-type: none"> <li>• Referral to higher centers for <ul style="list-style-type: none"> <li>- radiotherapy</li> <li>- Chemotherapy</li> <li>- Cosmetic reconstruction after surgery</li> <li>- rehabilitation</li> </ul> </li> </ul>		
I. Work effectively with others as a member or leader of a health care team e.g. in labor ward		

### Professionalism

ILOs	Methods of teaching/ Learning	Methods of Evaluation
J. Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society that supersedes self-interest.	- Observation -Senior staff experience	1. Objective structured clinical examination 2. Patient survey
K. Demonstrate a commitment to ethical principles pertaining to provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.		1. 360o global rating
L. Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities		

### Systems-Based Practice

ILOs	Methods of teaching/ learning	Methods of Evaluation
M. Work effectively in different health care delivery settings and systems.	- Observation - Senior staff experience	1. 360o global rating
N. Practice cost-effective health care and resource allocation that does not compromise quality of care		1. Check list evaluation of live or recorded performance
O. Advocate for quality patient care and assist patients in dealing with system complexities		1. 360o global rating 2. Patient survey
P. Partner with health care managers and health care providers to assess, coordinate, and improve health care and predict how these activities can affect system performance		

**4. Course contents (topic s/modules/rotation  
Course Matrix**

**Time Schedule: Second part**

Topic	Covered ILOs			
	Knowledge A	Intellectual B	Practical skill C	General Skills D
<b>Unit 1 (Eye Medicine)</b>				
Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation	A-I	A-J	A-L	A-P
Contact lenses Refractive surgery	A-I	A-J	A-L	A-P
Cornea ,external diseases and refractive surgery	A-I	A-J	A-L	A-P
Glaucoma	A-I	A-J	A-L	A-P
Cataract	A-I	A-J	A-L	A-P
Uveitis	A-I	A-J	A-L	A-P
Eye in systemic diseases	A-I	A-J	A-L	A-P
Neuro-Ophthalmology	A-I	A-J	A-L	A-P
Oculoplastic Surgery and Orbit	A-I	A-J	A-L	A-P
vitreo retinal diseases	A-I	A-J	A-L	A-P
Pediatric Ophthalmology & Strabismus	A-I	A-J	A-L	A-P
Ocular Oncology	A-I	A-J	A-L	A-P
<b>Unit 2 (Eye surgery)</b>				
Retinoscopy ,refraction, contact lenses, refractive surgery, and low vision rehabilitation	A-I	A-J	A-L	A-P
Cornea ,external diseases and refractive surgery	A-I	A-J	A-L	A-P

Glaucoma	A-I	A-J	A-L	A-P
Cataract	A-I	A-J	A-L	A-P
Uveitis	A-I	A-J	A-L	A-P
Eye in systemic diseases	A-I	A-J	A-L	A-P
Neuro-Ophthalmology	A-I	A-J	A-L	A-P
Oculoplastic Surgery and Orbit	A-I	A-J	A-L	A-P
vitreo retinal diseases	A-I	A-J	A-L	A-P
Pediatric Ophthalmology & Strabismus	A-I	A-J	A-L	A-P
Oncology	A-I	A-J	A-L	A-P

### **5. Course methods of teaching/learning:**

1. Didactic (lectures, seminars, tutorial )
2. journal club,
3. Educational prescription
4. Present a case (true or simulated) in a grand round
5. Observation and supervision
6. conferences
7. Written assignments
8. Oral assignments
9. Senior staff experience

### **6. Course methods of teaching/learning: for students with poor achievements**

2. -Extra-lectures and training according to their needs

### **7. Course assessment methods:**

#### **i. Assessment tools:**

- Record review
- Checklist
- Global rating
- Simulations

- Portfolios
- Standardized oral examination
- Written examination
- Procedure
- case log

ii. Time schedule: **At the end of the second part**

iii. Marks: 1200

## 8. List of references

### i. Lectures notes

Staff members print out of lectures and/or CD copies.

### ii. Essential books

- 1- American academy of ophthalmology Basic & clinical Science Course (CBCSE/2017.2018)
- 2- Kanaski Clinical ophthalmology (Ninth edition 2019-A Systematic Approach)
- 3- Wills eye manual, seventh edition 2016 (Lippincott, Williams & wakens)

### iii. Recommended books

- 1- Ophthalmology (Fifth edition 2018).
- 2- Oxford text book of ophthalmology 3<sup>rd</sup> Edition 2014, oxford university

### iv. Periodicals, Web sites, ... etc

- Current opinion in ophthalmology.
- Am j ophthalmol.
- Br j ophthalmol.
- Acta ophthalmologica

### v. Others

None

## 9. Signatures

<b>Course Coordinator:</b> <i>Prof. Mohamad Saad Abdel-Rahman</i>	<b>Head of the Department:</b> <i>Prof. Mohamed Sayed Saad</i>
<b>Date:</b> .....	<b>Date:</b> .....



## **ANNEX 2**

# **Program Academic Reference Standards (ARS)**

### *1- Graduate attributes for medical doctorate **in Ophthalmology***

***The Graduate (after residence training and medical doctorate years of study) must:***

- 1-** Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Ophthalmology.
- 2-** Have continuous ability to add knowledge to Ophthalmology through research and publication.
- 3-** Appraise and utilise relevant scientific knowledge to continuously update and improve clinical practice.
- 4-** Acquire excellent level of medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific research.
- 5-** Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.
- 6-** Identify and create solutions for health problems in Ophthalmology.
- 7-** Acquire an in depth understanding of common areas of Ophthalmology, from basic clinical care to evidence based clinical application, and possession of required skills to manage independently all problems in these areas.

- 8-** Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public.
- 9-** Function as teacher in relation to colleagues, medical students and other health professions.
- 10-** Master decision making capabilities in different situations related to Ophthalmology.
- 11-** Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.
- 12-** Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.
- 13-** Show model attitudes and professionalism.
- 14-** Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Ophthalmology or one of its subspecialties.
- 15-** Use recent technologies to improve his practice in Ophthalmology
- 16-** Share in updating and improving clinical practice in Ophthalmology.

## **2- Competency based Standards for medical doctorate in Ophthalmology**

### **22.1- Knowledge and understanding**

***By the end of the program, the graduate should demonstrate satisfactory knowledge and understanding of***

**2-1-A-** Established, updated and evidence- based theories, basics and developments of Ophthalmology and relevant sciences.

**2-1-B-** Basics, methods and ethics of medical research.

**2-1-C-** Ethical and medicolegal principles of medical practice related to Ophthalmology.

**2-1-D-** Principles and measurements of quality in Ophthalmology.

**2-1-E-** Principles and efforts for maintainance and improvements of public health.

### **2- Intellectual skills**

***By the end of the program, the graduate should be able to demonstrate the following***

**2-2-A-** Application of basic and other relevant science to solve Ophthalmology related Problems.

**2-2-B-** Problem solving based on available data.

**2-2-C-** Involvement in research studies related to Ophthalmology.

**2-2-D-** Writing scientific papers.

**2-2-E-** Risk evaluation in the related clinical practice.

**2-2-F-** Planning for performance improvement in Ophthalmology.

**2-2-G-** Creation and innovation in Ophthalmology.

**2-2-H-** Evidence – based discussion.

**2-2-I-** Decision making in different situations related to Ophthalmology.

### **2.3- Clinical skills**

***By the end of the program, the graduate should be able to***

#### ***+ Competency-based outcomes for Patient Care:-***

- 2-3-A-** MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Ophthalmology .
- 2-3-B-** Master patient care skills relevant to Ophthalmology for patients with all diagnoses and procedures.
- 2-3-C-** Write and evaluate reports for situations related to the Ophthalmology.

### **2.4- General skills**

***By the end of the program, the graduate should be able to***

#### ***+ Competency-based outcomes for Practice-based Learning and Improvement***

- 2-4-A-** Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management
- 2-4-B-** Use competently all information sources and technology to improve his practice.
- 2-4-C-** Master skills of teaching and evaluating others.

#### ***+ Competency-based objectives for Interpersonal and Communication Skills***

- 2-4-D-** Master interpersonal and communication skills that result in effective information exchange and teaming with patients, their families, and other health professionals.

 ***Competency-based objectives for Professionalism***

**2-4-E-**Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

 ***Competency-based objectives for Systems-based Practice:***

**2-4-F-**Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.

**2-4-G-** Participate in improvement of the education system.

**2-4-H-** Demonstrate skills of leading scientific meetings including time management

**2-4-O-** Demonstrate skills of self and continuous learning.

# Annex 3, Methods of teaching/learning

**Annex 3, Methods of teaching/learning**

	Patient care	Medical knowledge	Practice-based learning/Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Didactic (lectures, seminars, tutorial )	X	X		X	X	X
journal club,	X	X	X			
Educational prescription	X	X	X	X	X	X
Present a case (true or simulated) in a grand round	X	X	X	X	X	
Observation and supervision	X		X	X	X	X
conferences		X	X	X		X
Written assignments	X	X	X	X	X	X
Oral assignments	X	X	X	X	X	X

### **Teaching methods for knowledge**

- ❖ Didactic (lectures, seminars, tutorial )
- ❖ journal club
- ❖ Critically appraised topic
- ❖ Educational prescription (a structured technique for following up on clinical questions that arise during rounds and other venues).
- ❖ Present a case (true or simulated) in a grand round
- ❖ Others

### **Teaching methods for patient care**

- ❖ Observation and supervision /Completed tasks procedure/case logs
- ❖ On-the-job” training without structured teaching is not sufficient for this skill (checklists).
- ❖ Simulation is increasingly used as an effective method for skill/teamwork training.

### **Teaching methods for other skills**

- ❖ Written communication (e.g., orders, progress note, transfer note, discharge summary, operative reports, and diagnostic reports).
- ❖ Oral communication (e.g., presentations, transfer of care, interactions with patients, families, colleagues, members of the health care team) and/or non verbal skills (e.g., listening, team skills)
- ❖ Professionalism, including medical ethics, may be included as a theme throughout the program curriculum that includes both



didactic and experiential components (e.g., may be integrated into already existing small group discussions of vignettes or case studies and role plays, computer-based modules) and may be modeled by the faculty in clinical practice and discussed with the resident as issues arise during their clinical practice.

# Annex 4, Assessment methods

**Annex 4, ILOs evaluation methods for MD students.**

Method	Practical skills	K	Intellectual	General skills			
	Patient care	K	I	Practice-based learning/ Improvement	Interpersonal and communication skills	Professionalism	Systems-based practice
Record review	X	X	X		X	X	X
Checklist	X				X		
Global rating	X	X	X	X	X	X	X
Simulations	X	X	X	X	X	X	
Portfolios	X	X	X	X	X		
Standardized oral examination	X	X	X	X	X		X
Written examination	X	X	X	X			X
Procedure/ case log	X	X					
OSCE	X	X	X	X	X	X	X

#### **Annex 4, Glossary of MD students assessment methods**

- ❖ Record Review – Abstraction of information from patient records, such as medications or tests ordered and comparison of findings against accepted patient care standards.
- ❖ Chart Stimulated Recall – Uses the MD doctor’s patient records in an oral examination to assess clinical decision-making.
- ❖ Mini clinical evaluation: Evaluation of Live/Recorded Performance (single event) – A single resident interaction with a patient is evaluated using a checklist. The encounter may be videotaped for later evaluation.
- ❖ Standardized Patients (SP) – Simulated patients are trained to respond in a manner similar to real patients. The standardized patient can be trained to rate MD doctor’s performance on checklists and provide feedback for history taking, physical examination, and communication skills. Physicians may also rate the MD doctor’s performance.
- ❖ Objective Structured Clinical Examination (OSCE) – A series of stations with standardized tasks for the MD doctors to perform. Standardized patients and other assessment methods often are combined in an OSCE. An observer or the standardized patient may evaluate the MD doctors.
- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

- ❖ Case /problems – assess use of knowledge in diagnosing or treating patients or evaluate procedural skills.
- ❖ Models: are simulations using mannequins or various anatomic structures to assess procedural skills and interpret clinical findings. Both are useful to assess practice performance and provide constructive feedback.
- ❖ 360 Global Rating Evaluations – MD doctors, faculty, nurses, clerks, and other clinical staff evaluate MD doctors from different perspectives using similar rating forms.
- ❖ Portfolios – A portfolio is a set of project reports that are prepared by the MD doctors to document projects completed during the MD study years. For each type of project standards of performance are set. Example projects are summarizing the research literature for selecting a treatment option, implementing a quality improvement program, revising a medical student clerkship elective, and creating a computer program to track patient care and outcomes.
- ❖ Examination MCQ – A standardized examination using multiple-choice questions (MCQ). The in-training examination and written board examinations are examples.
- ❖ Examination Oral – Uses structured realistic cases and patient case protocols in an oral examination to assess clinical decision-making.
- ❖ Procedure or Case Logs – MD doctors prepare summaries of clinical experiences including clinical data. Logs are useful to document educational experiences and deficiencies.
- ❖ PSQs – Patients fill out Patient Survey questionnaires (PSQs) evaluating the quality of care provided by MD doctors.

# Annex 5, Program evaluation tools

By whom	Method	sample
Quality Assurance Unit	Reports Field visits	#
External Evaluator (s): According to department council External Examiner (s): According to department council	Reports Field visits	#
Stakeholders	Reports Field visits questionnaires	#
Senior students	questionnaires	#
Alumni	questionnaires	#

# Annex 6, Program Correlations:



مصفوفة توافق المعايير القومية القياسية العامة لبرامج الدكتوراه مع المعايير الأكاديمية  
المعتمدة من كلية الطب □ جامعة أسيوط لدرجة الدكتوراه في طب و جراحة العين

## I- General Academic Reference Standards (GARS) versus Program ARS

### 1- Graduate attributes

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
1- Demonstrate competency and mastery of basics, methods and tools of scientific research and clinical audit in Ophthalmology.	1- إتقان أساسيات و منهجيات البحث العلمي
2- Have continuous ability to add knowledge new developments to Ophthalmology through research and publication.	2- العمل المستمر علي الإضافة للمعارف في مجال التخصص
3- Appraise and utilise scientific knowledge to continuously update and improve clinical practice and relevant basic sciences.	3- تطبيق المنهج التحليلي والناقد للمعارف في مجال التخصص و المجالات ذات العلاقة
4- Acquire excellent level of medical knowledge in the basic biomedical, clinical, behavioural and clinical sciences, medical ethics and medical jurisprudence and apply such knowledge in patient care and scientific	4- دمج المعارف المتخصصة مع المعارف ذات العلاقة مستتبطا و مطورا للعلاقات البينية بينها
5- Function as a leader of a team to provide patient care that is appropriate, compassionate for dealing with effective and health Problems and health promotion. 7- Acquire an in depth understanding of common areas of speciality, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.	5- إظهار وعيا عميقا بالمشاكل الجارية و النظريات الحديثة في مجال التخصص
6- Identify and create solutions for health problems in Ophthalmology.	6- تحديد المشكلات المهنية و إيجاد حلولاً مبتكرة لحلها
5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.	7- إتقان نطاقا واسعا من المهارات المهنية في مجال التخصص

<p>7- Acquire an in depth understanding of common areas of Ophthalmology, from basic clinical care to evidence based clinical application, and possession of skills to manage independently all problems in these areas.</p>	
<p>16- Share in updating and improving clinical practice in Ophthalmology. 9- Function as teacher in relation to colleagues, medical students and other health professions.</p>	<p>8- التوجه نحو تطوير طرق و أدوات و أساليب جديدة للمزاولة المهنية</p>
<p>15- Use recent technologies to improve his practice in Ophthalmology.</p>	<p>9- استخدام الوسائل التكنولوجية المناسبة بما يخدم ممارسته المهنية</p>
<p>8- Demonstrate leadership competencies including interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professions, the scientific community and the public. 5- Function as a leader of a team to provide patient care that is appropriate, effective and compassionate for dealing with health problems and health promotion.</p>	<p>10- التواصل بفاعلية و قيادة فريق عمل في سياقات مهنية مختلفة</p>
<p>10- Master decision making capabilities in different situations related to Ophthalmology..</p>	<p>11- اتخاذ القرار في ظل المعلومات المتاحة</p>
<p>11- Show leadership responsiveness to the larger context of the health care system, including e.g. the organisation of health care, partnership with health care providers and managers, practice of cost-effective health care, health economics, and resource allocations.</p>	<p>12- توظيف الموارد المتاحة بكفاءة و تنميتها والعمل على إيجاد موارد جديدة</p>
<p>12- Demonstrate in depth awareness of public health and health policy issues including independent ability to improve health care, and identify and carryout system-based improvement of care.</p>	<p>13- الوعي بدوره في تنمية المجتمع والحفاظ على البيئة</p>

<p>13- Show model attitudes and professionalism.</p>	<p>14- التصرف بما يعكس الالتزام بالنزاهة و المصداقية و قواعد المهنة</p>
<p>14- Demonstrate commitment for lifelong learning and maintenance of competence and ability for continuous medical education and learning in subsequent stages and in Ophthalmology or one of its subspecialties.</p> <p>15- Use recent technologies to improve his practice in Ophthalmology.</p>	<p>15- الالتزام بالتنمية الذاتية المستمرة و نقل علمه و خبراته للآخرين</p>

## 2- Academic standards

Faculty ARS	NAQAAE General ARS for Postgraduate Programs
2.1. A- Established, updated and evidence- based theories, basics and developments of Ophthalmology and relevant sciences.	1-2-أ- النظريات و الأساسيات والحديث من المعارف في مجال التخصص والمجالات ذات العلاقة
2.1. B- Basic, methods and ethics of medical research.	1-2-ب- أساسيات و منهجيات و أخلاقيات البحث العلمي و أدواته المختلفة
2.1. C- Ethical and medicological principles of medical practice related to Ophthalmology.	1-2-ج- المبادئ الأخلاقية و القانونية للممارسة المهنية في مجال التخصص
2.1. D- Principles and measurements of quality in Ophthalmology.	1-2-د مبادئ و أساسيات الجودة في الممارسة المهنية في مجال التخصص
2.1. E- Principles and efforts for maintains and improvements of public health.	1-2-هـ - المعارف المتعلقة بأثار ممارسته المهنية على البيئة وطرق تنمية البيئة وصيانتها
2.2. A- Application of basic and other relevant science to solve Ophthalmology related problems.	2-2-أ - تحليل و تقييم المعلومات في مجال التخصص و القياس عليها و الاستنباط منها
2.2.B- Problem solving based on available data.	2-2-ب - حل المشاكل المتخصصة استنادا علي المعطيات المتاحة
2.2.C- Involvement in research studies related to Ophthalmology.	2-2-ج -إجراء دراسات بحثية تضيف إلى المعارف
2.2. D- Writing scientific papers.	2-2-د- صياغة أوراق علمية
2.2. E- Risk evaluation in the related clinical practice	2-2-هـ- تقييم المخاطر في الممارسات المهنية
2.2.F- Planning for performance improvement in Ophthalmology.	2-2-و -التخطيط لتطوير الأداء في مجال التخصص

2-2-G- Creation and innovation in the Ophthalmology.	2-2-ز- الابتكار /الإبداع
2.2. H- Evidence – based discussion.	2-2-ح- الحوار والنقاش المبني علي البراهين والأدلة
2.2.I- Discussion making in different situations related to Ophthalmology.	2-2-ط- اتخاذ القرارات المهنية في سياقات مهنية مختلفة
2.3. A- MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in Ophthalmology. 2.3. B- Master patient care skills relevant to Ophthalmology or patients with all diagnoses and procedures	2-3-أ- إتقان المهارات المهنية الأساسية و الحديثة في مجال التخصص
2.3. C- Write and evaluate reports for situations related to the field of Ophthalmology.	2-3-ب- كتابة و تقييم التقارير المهنية.
2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management	2-3-ج- تقييم و تطوير الطرق و الأدوات القائمة في مجال التخصص
2.4.B- Use competently all information sources and technology to improve his practice.	2-3-د- استخدام الوسائل التكنولوجية بما يخدم الممارسة المهنية
2.4.A-Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management 2.4.G- Participate in improvement of the education system.	2-3-هـ- التخطيط لتطوير الممارسة المهنية وتنمية أداء الآخرين

## II-Program ARS versus program ILOs

### *Comparison between ARS- ILOS for medical doctorate*

<b>(ARS)</b>	<b>(ILOs)</b>
<p><b><u>2-1- Knowledge and understanding</u></b></p> <p><b>2-1-A-</b> Established, updated and evidence-based Theories, Basics and developments of Ophthalmology and relevant sciences.</p>	<p><b><u>2-1- Knowledge and understanding</u></b></p> <p><b>2-1-A-</b> Demonstrate in-depth knowledge and understanding of theories, basics and updated biomedical, clinical epidemiological and socio behavioral science relevant to his speciality as well as the evidence – based application of this knowledge to patient care.</p>
<p><b>2-1-B</b> Basic, methods and ethics of medical research.</p>	<p><b>2-1-B-</b> Explain basics, methodology, tools and ethics of scientific medical, clinical research.</p>
<p><b>2-1-C-</b> Ethical and medicological principles of medical practice related to Ophthalmology field.</p>	<p><b>2-1-C-</b> Mention ethical, medico logical principles and bylaws relevant to his practice in the field of Ophthalmology.</p>
<p><b>2-1-D-</b> Principles and measurements of quality in the Ophthalmology field.</p>	<p><b>2-1-D-</b> Mention principles and measurements of quality assurance and quality improvement in medical education and in clinical practice of Ophthalmology.</p>
<p><b>2-1-E-</b>Principles and efforts for maintains and improvements of public health.</p>	<p><b>2-1-E-</b> Mention health care system, public health and health policy, issues relevant to this speciality and principles and methods of system – based improvement of patient care in common health problems of the field of Ophthalmology</p>
<p><b><u>2-2- Intellectual skills:</u></b></p> <p><b>2-2-A-</b>Application of basic and other relevant science to solve Ophthalmology related problems.</p>	<p><b><u>2-2- Intellectual skills:</u></b></p> <p><b>2-2-A-</b> Apply the basic and clinically supportive sciences which are appropriate to Ophthalmology related conditions / problem / topics.</p>

<b>2-2-B-</b> Problem solving based on available data.	<b>2-2-B-</b> Demonstrate an investigatory and analytic thinking “problem – solving “approaches to clinical situation related to Ophthalmology.
<b>2-2-C-</b> Involvement in research studies related to the Ophthalmology.	<b>2-2-C-</b> Plan research projects.
<b>2-2-D</b> Writing scientific papers.	<b>2-2-D-</b> Write scientific paper.
<b>2-2-E-</b> Risk evaluation in the related clinical practice.	<b>2-2-E-</b> Participate in clinical risk management as a part of clinical governance.
<b>2-2-F-</b> Planning for performance improvement in the Ophthalmology field.	<b>2-2-F-</b> Plan for quality improvement in the field of medical education and clinical practice in his speciality.
<b>2-2-G-</b> Creation and innovation in the speciality field.	<b>2-2-G-</b> Create / innovate plans, systems, and other issues for improvement of performance in his practice.
<b>2-2-H-</b> Evidence – based discussion.	<b>2-2-H-</b> Present and defend his / her data in front of a panel of experts.
<b>2-2-I-</b> Decision making in different situations related to Ophthalmology fields.	<b>2-2-I-</b> Formulate management plans and alternative decisions in different situations in the field of the Ophthalmology.

continuou <b>(ARS)</b>	continuous <b>(ILOs)</b>
<p><b><u>2-3- Clinical skills:</u></b></p> <p><b>2-3-A-</b> MD students must be able to provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health extensive level means in depth understanding and from basic science to evidence – based clinical application and possession of skills to manage independently all problems in his field of practice.</p> <p><b>2-3-B-</b> Master patient care skills relevant to Ophthalmology for patients with all diagnoses and procedures.</p>	<p><b><u>2/3/1/Practical skills (Patient care :)</u></b></p> <p><b>2-3-1-A-</b> Provide extensive level of patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health. <i>p.s.</i> Extensive level means in-depth understanding from basic science to evidence – based clinical application and possession of skills to manage independently all problems in field of practice.</p> <p><b>2-3-1-B-</b> Provide extensive level of patient care for patients with all common diagnoses and for uncomplicated procedures related to Ophthalmology.</p> <p><b>2-3-1-C-</b> Provide extensive level of patient care for non-routine, complicated patients and under increasingly difficult circumstances, while demonstrating compassionate, appropriate and effective care.</p> <p><b>2-3-1-D-</b> Perform diagnostic and therapeutic procedures considered essential in the field of Ophthalmology</p> <p><b>2-3-1-E-</b> Handles unexpected complications, while demonstrating compassion and sensitivity to patient needs and concerns.</p> <p><b>2-3-1-F-</b> Communicate effectively and demonstrate caring and respectful behaviors when interacting with patients and their families in the Ophthalmology related situations.</p> <p><b>2-3-1-G-</b> Gather essential and accurate</p>



	<p>information about patients of the Ophthalmology related conditions.</p> <p><b>2-3-1-H</b> Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment for the Ophthalmology related conditions.</p> <p><b>2-3-1-I-</b> Develop and carry out patient management plans for Ophthalmology related conditions.</p> <p><b>2-3-1-J-</b> Counsel and educate patients and their families about Ophthalmology related conditions.</p> <p><b>2-3-1-K-</b> Use information technology to support patient care decisions and patient education in all Ophthalmology related clinical situations.</p> <p><b>2-3-1-L-</b> Perform competently all medical and invasive procedures considered essential for the Ophthalmology related conditions / area of practices.</p> <p><b>2-3-1-M-</b> Provide health care services aimed at preventing the Ophthalmology related health problems.</p> <p><b>2-3-1-N-</b> Lead health care professionals, including those from other disciplines, to provide patient-focused care in Ophthalmology related conditions.</p>
--	--

<p><b>2-3-C-</b> Write and evaluate reports for situations related to the field of Ophthalmology.</p>	<p><b>2-3-1-O-</b> Write competently all forms of patient charts and sheets including reports evaluating these charts and sheets.( Write and evaluate a consultation note, Inform patients of a diagnosis and therapeutic plan, completing and evaluating comprehensive timely and legible medical records).</p>
<p><b><u>2-4- General skills</u></b></p> <p><b>2-4-A-</b> Master practice-based learning and improvement skills that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, improvements in patient care and risk management</p>	<p><b><u>2/3/2 General skills</u></b></p> <p><b>2-3-2-A-</b> Demonstrate the competency of continuous evaluation of different types of care provision to patients in the different area of Ophthalmology.</p> <p><b>2-3-2-B-</b> Appraise scientific evidence.</p> <p><b>2-3-2-C-</b> Continuously improve patient care based on constant self-evaluation and <u>life-long learning</u>.</p> <p><b>2-3-2-D.</b> Participate in clinical audit and research projects.</p> <p><b>2-3-2-E-</b> Practice skills of evidence-based Medicine (EBM).</p> <p><b>2-3-2-G-</b> Design logbooks.</p> <p><b>2-3-2-H-</b> Design clinical guidelines and standard protocols of management.</p> <p><b>2-3-2-I-</b> Appraise evidence from scientific studies related to the patients' health problems.</p>

<p><b>2-4-B-</b> Use competently all information sources and technology to improve his practice.</p>	<p><b>2-3-2-J-</b> Apply knowledge of study designs and statistical methods to the appraisal of clinical studies.</p> <p><b>2-3-2-K-</b> Use information technology to manage information, access on-line medical information; for the important topics.</p>
<p><b>2-4-C-</b> Master skills of teaching and evaluating others.</p>	<p><b>2-3-2-F-</b> Educate and evaluate students, residents and other health professionals.</p>
<p><b>2-4-D-</b> Master interpersonal and communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals.</p>	<p><b>2-3-2-L-</b> Master interpersonal and communication skills that result in the effective <u>exchange of information and collaboration</u> with patients, their families, and health professionals, including:-</p> <ul style="list-style-type: none"> <li>• <u>Present</u> a case.</li> <li>• <u>Write</u> a consultation note.</li> <li>• <u>Inform patients</u> of a diagnosis and therapeutic plan Completing and maintaining comprehensive.</li> <li>• Timely and legible <u>medical records</u>.</li> <li>• Teamwork skills.</li> </ul> <p><b>2-3-2-M-</b> Create and sustain a therapeutic and ethically sound relationship with patients.</p> <p><b>2-3-2-N-</b> Elicit and provide information using effective nonverbal, explanatory, questioning, and writing skills.</p> <p><b>2-3-2-O-</b> Work effectively with others as a member or leader of a health care team or other professional group.</p>
<p><b>2-4-E-</b> Master Professionalism behavior, as manifested through a commitment to carrying out professional responsibilities,</p>	<p><b>2-3-2-P-</b> Demonstrate respect, compassion, and integrity; a responsiveness to the needs of patients and society.</p>

<p>adherence to ethical principles, and sensitivity to a diverse patient population.</p>	<p><b>2-3-2-Q-</b> Demonstrate a commitment to ethical principles including provision or withholding of clinical care, confidentiality of patient information, informed consent, and business practices.</p> <p><b>2-3-2-R-</b> Demonstrate sensitivity and responsiveness to patients' culture, age, gender, and disabilities.</p>
<p><b>2-4-F-</b> Demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively use system resources to provide care that is of optimal value.</p> <p><b>2-4-G-</b> Participate in improvement of the education system.</p>	<p><b>2-3-2-S-</b> Work effectively in health care delivery settings and systems related to Ophthalmology including good administrative and time management.</p> <p><b>2-3-2-T-</b> Practice cost-effective health care and resource allocation that does not compromise quality of care.</p> <p><b>2-3-2-U-</b> Advocate for quality patient care and assist patients in dealing with system complexities.</p> <p><b>2-3-2-V-</b> Design, monitor and evaluate specification of under and post graduate courses and programs.</p>
<p><b>2-4-H-</b> Demonstrate skills of leading scientific meetings including time management</p>	<p><b>2-3-2-W-</b> Act as a chair man for scientific meetings including time management</p> <p><b>2-3-2-S-</b> Work effectively in health care delivery settings and systems related to Ophthalmology including good administrative and time management.</p>
<p><b>2-4-O-</b> Demonstrate skills of self and continuous learning.</p>	<p>From A to H</p>

**III-Program matrix**  
**Knowledge and understanding**

Course	Program covered ILOs				
	2/1/A	2/1/B	2/1/C	2/1/D	2/1/E
Course 1 : Medical statistics		✓			
Course 2 : Research Methodology		✓			
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research			✓		
Course 4: Eye Anatomy, Physiology, Pathology , Microbiology& Optics and refraction	✓				
Course 5 : Ophthalmology	✓	✓	✓	✓	✓

## Intellectual

Course	Program covered ILOs								
	2/2/A	2/2/B	2/2/C	2/2/D	2/2/E	2/2/F	2/2/G	2/2/H	2/2/I
Course 1 : Medical statistics			✓	✓				✓	
Course 2 : Research Methodology			✓	✓				✓	
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research								✓	
Course 4: Eye Anatomy, Physiology, Pathology , Microbiology& Optics and refraction	✓	✓							
Course5 : Ophthalmology	✓	✓	✓	✓	✓	✓	✓	✓	✓

## Practical Skills (Patient Care)

Course	Program covered ILOs							
	2/3/1/A	2/3/1/B	2/3/1/C	2/3/1/D	2/3/1/E	2/3/1/F	2/3/1/G	2/3/1/H
Course 1 : Medical statistics								
Course 2 : Research Methodology								
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research				✓				✓
Course 4: Eye Anatomy, Physiology, Pathology , Microbiology& Optics and refraction								
Course 5 : Ophthalmology	✓	✓	✓	✓	✓	✓	✓	✓

Course	Program covered ILOs						
	2/3/1/I	2/3/1/J	2/3/1/K	2/3/1/L	2/3/1/M	2/3/1/N	2/3/1/O
Course 1 : Medical statistics							
Course 2 : Research Methodology							
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research	✓						✓
Course 4: Eye Anatomy, Physiology, Pathology , Microbiology& Optics and refraction							
Course 5 : Ophthalmology	✓	✓	✓	✓	✓	✓	✓



## General Skills

Course	Program covered ILOs							
	2/3/2/A	2/3/2/B	2/3/2/C	2/3/2/D	2/3/2/E	2/3/2/F	2/3/2/G	2/3/2/H
Course 1 : Medical statistics		✓						
Course 2 : Research Methodology		✓		✓	✓			
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research								
Course 4: Eye Anatomy, Physiology, Pathology , Microbiology& Optics and refraction								
Course 5 : Ophthalmology	✓	✓	✓	✓	✓	✓	✓	✓

Course	Program covered ILOs							
	2/3/2/I	2/3/2/J	2/3/2/K	2/3/2/L	2/3/2/M	2/3/2/N	2/3/2/O	2/3/2/P
Course 1 : Medical statistics	✓	✓	✓					
Course 2 : Research Methodology	✓	✓						
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research				✓				
Course 4: Eye Anatomy, Physiology, Pathology , Microbiology& Optics and refraction			✓	✓				
Course 5 : Ophthalmology	✓	✓	✓	✓	✓	✓	✓	✓

## General Skills

Course	Program covered ILOs						
	2/3/2/Q	2/3/2/R	2/3/2/S	2/3/2/T	2/3/2/U	2/3/2/V	2/3/2/W
Course 1 : Medical statistics							
Course 2 : Research Methodology							
Course 3 : Medicolegal Aspects and Ethics in Medical Practice and Scientific Research							
Course 4: Eye Anatomy, Physiology, Pathology , Microbiology & Optics and refraction	✓		✓				
Course 5 : Ophthalmology	✓	✓	✓	✓	✓	✓	✓

Annex 7,  
Additional information:

## **Department information:**

### **Department activities**

- Ultrasonography unit including A and B scan
- Fundus camera and fluorescein angiography
- Stratus OCT device
- Digital photo slit- lamp for documenting clinical signs for research purposes
- Laser unit including Nd- Yag and Argon Laser
- Clinics for subspecialties including oculoplastic and lacrimal clinic every Monday in addition to retina clinic every Thursday and glaucoma clinic.
- Five operating theatres including Two Phaco machines, two Vitrectomy machines, many surgical microscopes where operations in different subspecialties are performed daily including cataract extraction, glaucoma, retinal detachment and many other surgeries and serving as the main referral center for managing trauma cases.
- Outpatient clinics daily including refraction and fitting glasses and contact lenses.
- In patient department including 58 beds for pre and post operative cases in addition to 16 beds for isolation of cases of infection (e.g. corneal ulcers)

**Staff members:**

<u>الدرجة</u> <u>الحالية</u>	<u>المسمى</u> <u>الوظيفي</u>	<u>أسماء أعضاء هيئة التدريس</u>
Head of the Department	<i>professor</i>	<i>Prof. Mohamed Sayed Saad</i>
أستاذ متفرغ	<i>professor</i>	<i>Prof./Kamel Abdel Nasser Soliman</i>
أستاذ متفرغ	<i>professor</i>	<i>Prof. Gamal Hussien Hussien</i>
أستاذ متفرغ	<i>professor</i>	<i>Prof. Omar Mohamed Ali</i>
أستاذ متفرغ	<i>professor</i>	<i>Prof. Mohamad Tarek Abdelmoneim</i>
أستاذ متفرغ	<i>professor</i>	<i>Prof. Ahmed Abo Ghadeer</i>
<i>professor</i>	<i>professor</i>	<i>Prof./Ashraf Khalaf Al Hussieny</i>
<i>professor</i>	<i>professor</i>	<i>Prof. Hassan Lotfy Fahmy</i>
<i>professor</i>	<i>professor</i>	<i>Prof./Abdel Nasser Awad Mohamed</i>
<i>professor</i>	<i>professor</i>	<i>Prof./Samir Yehya Saleh</i>
<i>Professor</i>	<i>Professor</i>	<i>Prof. Mohamed Saad Abdel Rahman</i>
<i>Professor</i>	<i>Professor</i>	<i>Prof. Tarek Ahmed Ali</i>
<i>professor</i>	<i>professor</i>	<i>Prof. Wael Ahmed Mohamed Soliman</i>
<i>professor</i>	<i>professor</i>	<i>Prof. Ali Natag Reyad</i>
<i>Professor</i>	<i>Professor</i>	<i>Prof. Abdel Salam Mohamed Abdala</i>

<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Ehab Ismael Ahmed</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr.Hani Omar El Sedfy</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr.Gamal Eldin Rahed</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr.Ahmed Mahmoud Fahmey Fatahalla</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr.Dalia Mohamed Elsebety</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Ahmed Abdeltawab</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Mohamed Sharfeldin</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Khaled AbdelAzem</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Mohamed Shehata</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Mahmoud Fathy</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Ahmad Farghaly</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr.Hazem Abdel Motaal</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Mahmoud Abdel Radi</i>
<i>Assistant professor</i>	<i>Assistant professor</i>	<i>Dr. Mohamed Gamal</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr. Mohamed Anwar</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr. Zeyad Hasan</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr. Magdi Mohammad</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr.Dalya Tohamy</i>

<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr. Salma Kedwany</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr.Mohamed Kamel</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr.Moamen Khodairy</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr.Mohamed Omar</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr.Eslam Mohamed</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr.Maha Omar</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr. Noha Ali Esam</i>
<i>Lecturer</i>	<i>Lecturer</i>	<i>Dr . Ahmed Abdel-Naser</i>



### **Opportunities within the department:**

- Weekly seminar and journal club for presenting interesting cases and recent papers
- Digital library saving seminars
- Log book for supervising activities of residents and trainees
- Minor skill training including eyelid and some external procedures
- Attending major operations and observing major procedures
- Closed TV circuits for broadcasting and recording surgical procedures
- Wet labs held regularly for training on different surgical techniques ed anta's phaco emulsification

### **Department quality control insurance for completing the program:**

- + Evaluation by the Department head and staff members.
- + Regular assessments.
- + Log book monitoring.
- + Recent equipments and Specialized Units.

**(End of the program specifications)**